



**For Reference**

**Not to be taken**

**from this library**

# EIGHTH ANNUAL REPORT

OF THE

## MASSACHUSETTS

## HIGHWAY COMMISSION.

---

JANUARY, 1901.

---

BOSTON :  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
18 POST OFFICE SQUARE.  
1901.





# Commonwealth of Massachusetts.

---

*To the Honorable Senate and House of Representatives of the Commonwealth  
of Massachusetts in General Court assembled.*

The undersigned commissioners, appointed under the provisions of chapter 476 of the Acts of 1893, entitled "An Act to provide for the appointment of a Highway Commission to improve the public roads, and to define its powers and duties," herewith submit their eighth annual report.

W. E. McCLINTOCK.  
HAROLD PARKER.  
JOHN H. MANNING.

BOSTON, MASS., Jan. 1, 1901.



# LIST OF OFFICERS OF THE MASSACHUSETTS HIGHWAY COMMISSION.

---

WILLIAM E. MCCLINTOCK,	}	. . . . .	Commissioners.
HAROLD PARKER,			
JOHN H. MANNING,			

---

CHARLES MILLS, . . . . .	Chief Engineer.
AUSTIN B. FLETCHER, . . . . .	Secretary.

---

JOHN M. MCCARTHY, . . . . .	Clerk.
EDWARD A. AUSTIN, . . . . .	Clerk.
MARY A. RILEY, . . . . .	Stenographer.
ALICE M. WORTHEN, . . . . .	Copyist.
FRED FAIR, . . . . .	Office Boy.



# ANNUAL REPORT

OF THE

## MASSACHUSETTS HIGHWAY COMMISSION.

---

In accordance with the provisions of the act of May 24, 1899, appropriating for the construction and maintenance of State highways, \$100,000 became available for the uses of the commission on Jan. 1, 1900. On July 10, 1900, the sum of \$500,000 was appropriated by the Legislature for the same purpose, and with the condition that \$100,000 should not be available until Jan. 1, 1901. The commission, therefore, has had the sum of \$500,000 which could be used for work during the year. In addition to the \$100,000 held over from the appropriation of 1899, considerable sums allotted for expenditure during that year were actually disbursed during the year 1900, unavoidable delays having prevented the completion of several contracts.

Additional lay-outs were made during 1900, amounting to 260,721 feet (49.38 miles), bringing the grand total up to 1,667,928 feet (315.89 miles). The number of miles of road finished during the year was approximately 46, making a total of about 296 miles of completed State highway at the end of the year 1900. On the remaining 20 miles laid out but not completed, the work is largely but not entirely done.

### MEETINGS OF THE COMMISSION.

The commission has held 59 meetings at its office in Boston during the past year, besides many others at different points in the State. The regular hearings provided for in the statutes were held, at least one in every county in the State. These hearings have been almost invariably well attended, and there does not seem to be any decrease in interest on the part of the people generally. Important discussions have occurred at these

meetings, and many valuable suggestions and timely criticisms have been made, from which the commission has profited much. During the past year the county hearings have developed almost no criticism not entirely friendly to the work, and there exists apparently a much better understanding of the scheme of State road distribution and construction which the commission is attempting to carry out. Especially notable has been the testimony of the value of the work as an incentive to local authorities, and an example which has been much followed in the betterment of highways other than those laid out and built by the State.

In addition to the county hearings, over 200 special hearings, relating to particular petitions, have been held, mostly in the office in Boston. During the winter months these hearings consume a large share of the time of the commission; but they are believed to contribute useful and important information, upon which the selection of State highways may depend. In the last report reference was made to the practice of sending large numbers of people to represent a city or town in advocating the taking of a certain street as a State highway. In many instances towns and cities have gone to the expense of employing attorneys to speak for them, and conduct a regular examination of witnesses, as before a court. While the commission does not wish to restrict in the least the rights and privileges which local authorities have enjoyed in this respect, it is of opinion that there is often much useless expenditure of money and time in the presentation of the merits of individual petitions. Three or four men, well informed as to local conditions and requirements, and having personal knowledge of the importance of the proposed highway, the amount and character of its traffic, etc., will generally make a stronger presentation of the arguments in favor of a petition than would be possible with ten times their number. Ample time could be given to each individual, and there would be little mere repetition of statement. The employment of legal representatives is wholly unnecessary, and local authorities should endeavor to bring to the commission the actual facts relating to the condition and importance of the highway. Upon these facts the commission tries to decide the relative importance of the various roads petitioned for. It is the wish of the commission that every

person or delegation should be afforded ample time and opportunity to present their case, and it wishes to dispel the impression sometimes expressed that representatives are not given sufficient time to do this. ¶ It may be of interest at this time for the commission to say that it has, in order to establish a fuller and more comprehensive communion between itself and the public, divided the State into three districts, — the easterly district comprising that part of the State from the sea to the easterly boundary of Middlesex County, the middle district that portion between the easterly boundary of Middlesex County and the Connecticut River, and the westerly district that portion between the Connecticut River and the westerly boundary of the State; the immediate needs of each district to be investigated by the member of the commission especially assigned to that district and by him reported to the full Board. It is thought that by this arrangement a more comprehensive understanding could be obtained, and that the people would be more fully in touch with the commission.

#### CONTRACTS.

All work done by the commission must be done by contract, either with the town or city authorities, as the case may be, or, after due advertisement, with private contractors.

There is no material difference in the cost by these two methods so far as the Commonwealth is concerned, although it often happens that the inexperience of the town or city's superintendent makes the work cost the municipality more than it would if the work were done by an experienced contractor. The commission is pleased to report that the losses by municipalities on this account are growing gradually less, and it believes that ere long they will cease to be.

In the main, contracts have been made on the unit basis. The commission has in mind changing to the square-yard method in certain cases, hoping thereby to save much trouble and engineering cost. ¶ One of the most difficult problems presented to the commission is the proper supervision of contracts. The best available men are employed for this purpose, and by far the larger number are graduates of some technical school. They are all industrious and thoroughly honest, and ambitious to secure the best results; but in no class of work is the educated,



practical man better qualified to succeed than in road building.

At the time the State, by its Highway Commission, began to build roads, there were but few men qualified by their past experience to supervise this class of work. At the present time there are scores of such men. Many who have served on work under the commission have extended their fields of action, and have been employed by the government in the Philippines, Cuba and Porto Rico; others are serving in different States and many are doing good service on town work, and the Commonwealth at large is materially benefited thereby. Each year furnishes a larger number of them, and each year shows equally good roads at much reduced cost. *ll*

Never before has the work of the commission progressed so satisfactorily as during the past year. This is in a large measure due to the fact that during the winter surveys were made on continuations of many of the State roads. These surveys were mostly made by the resident engineers, between the time of closing active operations in the fall and of beginning again in the spring. Having ample time, careful study was made of the conditions and materials, of drainage, alignment and grades, and as a result much time and cost were saved on roads built during the year.

All contracts during the past two years have contained a liquidated damage clause, providing for a payment to the Commonwealth of \$10 per day for each day that the work extends beyond a fixed time limit. This clause has tended to hasten all work and to make a material reduction in the cost of supervision. A still further reduction in the cost of supervision has been effected by the placing of one resident engineer in charge of two or more roads, when the roads were reasonably near each other.

During the year 84 contracts were entered into, of which 32 were with town or city authorities and 52 with private individuals or firms.

#### PETITIONS.

The total number of petitions for the location and construction of State highways up to the issue of this report is 508. Twenty-eight new petitions were received during the year 1900. These petitions cover 1,334 miles of road, and they are



from 274 towns and 25 cities. Of the new petitions received during the past year, 25 are from towns and 3 from cities, and they cover 39 miles of road not previously petitioned for.

#### STREET RAILWAYS.

No single feature of the commission's duties is more difficult than the location of tracks of street railway companies. There are at the present time street railways operating on State roads in 70 different cities and towns; in three of these municipalities there are two different companies.

It is interesting to note that in 1890 there were 612 miles of street railway in the Commonwealth, carrying 164,873,000 passengers; while in 1900 there were 1,736 miles, carrying 356,724,000 passengers. With the exception of a few miles built over land purchased for the purpose, the tracks are laid on the highways. In city and village streets the tracks are laid near the centre, and on other ways they are placed at the side of the location. It is safe to predict that street railway building will continue at a rapid rate, and that the problem will become more complicated year by year.

In by far the greater number of cases the tracks are laid before the State takes the road, and are ordinarily placed in a position, both as to line and grade, to cause the minimum outlay by the railway company. When the State takes the road, the commission often finds that the tracks must be moved, either horizontally or vertically, or both, in order to obtain the proper width and grade for the roadway. The difficult part of the problem is to make these movements in a way to give the best results without putting an unwarranted burden upon the street railway company. So far as it is practicable, the roadway is planned to fit the railway tracks; but when this cannot be done, the tracks are ordered moved.

The two chief causes for moving the tracks of street railways are lack of width between the tracks and the location line, and imperfect grade. In granting franchises to street railway companies, boards of selectmen often permit their desire of having the railway built to have too great weight, and they do not insist on a location of the tracks that will produce the best subsequent use of the highway. With proper forethought on the part of the municipal and railway officials at the time the tracks

are located, no subsequent horizontal movement would be necessary. The grade problem is a more difficult one, as the railway tracks cannot be laid to a grade which more nearly satisfies the commission and the railways without grading the entire width of the roadway. The railway officials do not often choose to do any grading on the roadway without compensation, the towns are not in a financial condition to pay for such grading, and the commission cannot. It is work that should be done, and probably will be done if the commission takes the road. It can be done when the railroad is built, at a less cost to the State, municipality and railway company than at any other time, and if done at that time there will be no cause for any future movement of the tracks due to the building of the highway.

The law which empowers the commission to move the tracks of street railway companies has been twice amended. The law which was passed in 1898, defining the powers of the commission to move street railway tracks, leaves some questions still in doubt.

The cost to the street railway companies, due to changes made by order of the commission, is often great; in many cases it is a burden which the companies can ill afford to bear.

The present system of granting locations to street railway companies by boards of selectmen is defective. Many of the railways are planned to pass through several towns, and it is impossible to obtain the best results with such a division of responsibility. It often happens that local influence will cause the tracks to be placed on opposite sides of the highway in different towns, or even in the same town, thus introducing dangerous grade crossings.

The commission is firmly impressed with the importance of having the power to locate street railways, outside of the city or village streets, in the hands of one central authority. From what has been said already, it is clear that a proper grade is an important part of the location, and should be had when the tracks are laid; and, inasmuch as it affects the State, towns and railway companies, the cost of securing it should be borne by all three of the interested parties, in such proportion as may seem just. The commission respectfully recommends the passage, during the year 1901, of an act embodying the above suggestions.

## COUNTY ASSESSMENTS.

In accordance with the provisions of the statutes, the several counties in which State roads are built are required to repay to the State one-quarter of the amount expended during the year. The time of this repayment may, if desired, extend over six years from the date of the assessment; but in several instances, including some of those in which the amount of the assessment is greatest, the counties have preferred to pay the entire sum due at the end of each year. The amount assessed upon the counties during the year 1900 was \$107,961.86.

## ESTIMATES FOR 1901.

For the year 1901 the commission has recommended an appropriation of \$500,000, with the condition, as heretofore, that \$100,000 should be available only after Jan. 1, 1902. This sum is believed to be necessary and sufficient for the proper extension of the great system of State highways, of which already more than 296 miles have been constructed.

The commission is of the opinion that the sum recommended can be expended with greater efficiency and economy than either a larger or smaller amount; and it also believes that an appropriation of this sum for each year, for at least two years in advance, would greatly facilitate all engineering and construction work, and materially reduce the cost of the same.

## GEOLOGIST.

No geological studies have been made during the past year. In the six previous years tests were made of all rocks used in building State roads, with reference to toughness and binding properties. The different rocks thus examined were taken from fields, banks and ledges, from every part of the State, and the theoretical value of rocks which have been or which may be used has been determined. As further investigation would be simply cumulative, it has been abandoned for the present, to be taken up again if the necessity arises.

The location and quality of gravel banks are now determined under the direction of the commission, by the engineering force, in connection with their other duties. Gravel banks thus located have proved of great value to the State and to the municipalities.

## LAND AND GRADE DAMAGES.

It has been the policy of the commission to secure releases from abutters along the line of a proposed State road from any claim for damages against the Commonwealth on account of laying out or building the road. Generally speaking, there is no difficulty in obtaining the necessary signatures, but it sometimes happens that this cannot be done, when, for example, the owners are in distant parts of the country, or when there are several owners not easily accessible, or when an abutter has unquestionably encroached upon the highway and has possibly acquired adverse possession. In such cases as these, the municipal authorities, acting under a vote of the city or town, have signed an agreement to protect the Commonwealth from any and all claims for damage. While these releases have a certain moral effect, the commission is not satisfied that they have a very great legal value. It is important that the Commonwealth should be protected in some way from unjust claims for damage, and there are instances when this protection can alone come from a town or city guaranty. The commission would therefore recommend that, as a preliminary to the taking of a road, towns and cities be authorized to assume by legislative act, if they so elect, all liability for damage which may result from the taking of land, changes in grade, or the removal of surface and ground water.

For outstanding claims against the Commonwealth, see Appendix D.

## CONSTRUCTION.

The methods employed by the commission are much the same as those used on the first roads built by it, the only changes being those suggested by experience. The type of road built is adapted to the local conditions, and all the different types may be found within one time or even in a single mile.

Careful studies are made by the engineering force of soils, drainage problems, gravel, stone, grades and traffic, and the type of road to be built is based upon the results of these studies. With the exception of peat, muck and vegetable loam, all soils in this latitude make good support for roads during a greater part of the year. Sand, gravel and porous soils give no trouble at any time; while clay, sandy loam and all non-porous soils



are much weakened by frost action, and in their natural condition afford poor support in the spring months. They can, however, be greatly improved by removing from them the ground water, which in a measure may be done by means of side drains.

The commission has estimated that non-porous soils, drained of ground water, at their worst, will support a load of about 4 pounds per square inch; and, having in mind these figures, the thickness of the broken stone has been adjusted to the traffic. On a road built of fragments of broken stone, the downward pressure takes a line at an angle of 45 degrees from the horizontal, and is distributed over an area equal to the square of twice the depth of the broken stone. If a division of the load, in pounds, at any one point, by the square of twice the depth of the stone, gives a quotient of 4 or less, then will the road foundation be safe at all seasons of the year. On sand or gravel the pressure may safely be placed at 20 pounds per square inch.

Acting on this theory, the thickness of stone on State roads varies from 4 to 16 inches, the lesser thickness being placed over good gravel or sand, the greater over heavy clay and varying thicknesses on other soils. In cases where the surfacing exceeds 6 inches in depth, the excess may be broken stone, stony gravel or ledge stone, the material used depending entirely upon the cost, either being equally effective.

All broken stone used is separated into three sizes by passing it through a screen with meshes  $\frac{1}{2}$  inch,  $1\frac{1}{2}$  inches and  $2\frac{1}{2}$  inches in diameter. The largest size is placed at the bottom and is covered with the successively smaller sizes. The different sizes of stone are spread in courses. The sub-grade and each course of stone are rolled thoroughly, and the top course is watered before rolling. All stone-crushing plants in the State, whether employed on State or municipal work, are fitted with elevators and revolving screens, so that the stone when thrown into the hopper passes through the crusher, to the elevator, to the screen, to the bins, and into the carts in sizes as required, without re-handling.

There are large permanent plants at Salem, Deerfield, Waltham, West Springfield, Westfield, West Quincy, Monson, Sterling, Cohasset and Easthampton, which supply the best quality of trap rock over the different railroads to all parts of

the Commonwealth accessible to the railroads. The cost of broken stone from these quarries varies from \$1.10 to \$1.60 per ton on the cars at the end of railroad transportation, the difference in cost being attributable to freight charges. In addition to these large crushing plants, there are in the State 156 smaller plants, outside of Boston. Of these, 108 are owned by 90 different municipalities and 48 by contractors, and all of them are available for State road building. The estimated value of this class of road machinery in the State is \$574,000.

The rock used has come from quarries, banks, fields and river beds. There is great variation in the quality of rocks used. In the selection of road-building rock, traffic and cost are carefully studied, and the cost of maintenance as well as construction is taken into account. Trap rock is unquestionably the most economical material for the surface of roads of heavy traffic, and it has generally been used by the commission on such roads. In cases where the trap rock has to be moved long distances and its cost is high, and where a low-cost native rock is available, the native stone is used as a bottom course and the trap rock as a top or wearing course. This combination materially reduces the cost, without affecting its value. In a few instances the native-rock surfacing has not worn well, the cost of maintenance has been considerable and the surface of the road has become rough. These have been broken up by picks in the wheels of steam rollers, evened up, and resurfaced with a coating of trap rock from 2 to 3 inches in depth, with the proper amount of screenings, water and rolling. In nearly all other State roads the best available local rocks have been used. No schist, soft limestone, sandstone or gneiss have been used as a wearing course.

All State roads are compacted by the use of steam rollers, both during construction and permanent repairs. The steam roller gives quicker, better and more economical results than can be obtained by any other method. With a properly prepared sub-grade, and by rolling the sub-grade and each course of stone separately, no difficulty is experienced in the use of steam rollers that cannot be easily overcome.

There are in the State at the present time 162 steam rollers, valued at about \$492,000. Of these, 17 are owned by the Commonwealth, 102 by municipalities and 43 by contractors.

The standard width of broken stone roadways, as built by the commission, remains 15 feet, and on each side of this a width of 3 feet is shaped to the same cross-section as the broken stone. These side strips, or shoulders, are covered with gravel on much travelled highways only; on all others, the natural soil is used. Roadways of 12 and of 10 feet have been built, and are satisfactory so far as the use is concerned, although the 10-foot way is not economical to maintain, except where the traffic is exceptionally light.

Paved gutters have not been laid as a part of construction since 1897. They are only built now where the gullying of gutters can be prevented in no other way.

Either iron or vitrified clay pipes are used for culverts, up to 24 inches in diameter, the ends being in all cases protected by stone masonry. The larger culverts are built of rubble masonry, the side walls being laid dry, the ends with cement mortar. Having in mind the experience of towns, the commission has felt justified in accepting only good materials and workmanship in all culvert masonry. The first cost of good work may be greater, but the final cost is surely less.

Reference has already been made to the necessity of removing ground water from the sub-grade of a road. This drainage is effected in various ways, the kind of drain being dependent upon the character of the soil. The drain mostly used by the commission is a vitrified clay pipe, laid with open joints in a trench about 3 to  $3\frac{1}{2}$  feet deep and from 12 to 16 inches wide. This pipe is laid upon a 2-inch layer of fine gravel, free from sand or dirt and covered to a depth of 6 inches, and is surrounded by the same kind of gravel. The remaining part of the trench is filled with stone varying in sizes from 1 to 3 inches in diameter. The pipe removes the water quickly to an outlet; the fine gravel allows a free flow of water, and at the same time prevents the passage of silt into the pipe; the removal of sand or dirt from the fine gravel surrounding the pipe removes the possibility of its entering the pipe; and the coarse stone in the upper part of the trench intercepts the ground water in its flow toward the sub-grade. These drains are placed on either side or both sides, as the contour of the ground requires.

To protect the traveller, guard rails are placed on embankments and at culvert ends. Where the cost is not much in-

creased, embankments are given a slope of 4 horizontal to 1 vertical, and the rail is omitted. The guard rail is  $3\frac{1}{2}$  feet high, and is built of cedar posts 8 feet apart, a 4 by 4 inch top rail and a 2 by 8 inch side rail. The posts are shaved, the rails are planed, and all the exposed surfaces are given two coats of light-colored paint easily seen at night.

While the roadway is of first importance, the commission has not lost sight of the educational effect of a well-kept roadside. The space on both sides, between the roadway and the boundaries of the right of way, or location, have been cleared of debris and generally smoothed up, and left so as to be easily cleared of weeds and brush. Trees that would make shade or add beauty have been carefully preserved, and the planting of shade trees by municipal officers, local improvement societies or abutters has been encouraged and even urged.

There are many of the main roads that might well be surfaced with gravel, and its use would satisfy the demands of the traffic. It is, however, an unfortunate fact that good road-building gravel is, as compared with stone, a scarce article. It is by no means as well distributed as is stone. Its use is practically prohibited when the supply has to be carted more than one and one-half miles, or when screening is necessary to remove a surplus of fine sand or dirt or of coarse stone. In all cases where the use of gravel is warranted, and it can be found within a reasonable distance and is of proper quality, the commission has caused it to be used instead of broken stone. Some of the gravel roads have been made of gravel as it came from the bank. In others the gravel has been separated into three sizes by the use of screens with meshes  $\frac{1}{2}$  inch,  $1\frac{3}{4}$  inches and  $2\frac{3}{4}$  inches in diameter, and spreading and rolling each size separately. In still others the gravel from the bank has been run through the crusher, broken and screened, and laid in courses and rolled in the same manner as if broken stone were used.

Three years ago an experimental road was built in Truro. This road was of rounded beach stone and clay. It has shown good wearing qualities, but, owing to the shape and size of the stone used, its cost was greater than would result from substituting broken stone for the gravel. The experimental mile of road built two years ago in Truro has proved a success, and is well worth a description. The sub-grade is loose sand. There



is practically no surface loam on the land adjacent to the road. The drainage is perfect. There is not much snow or frost during winters, and the traffic is small in volume, and light. The sub-grade was shaped to the grade and cross-section desired, and on this was spread clay, naturally sandy, containing 1 part of sand to 2 parts of clay, to a depth of 2 inches; over this was spread a layer of broken stone 3 inches in depth, the fragments varying in sizes from  $\frac{1}{2}$  inch to  $1\frac{1}{2}$  inches in diameter. The broken stone was then covered with a layer of clay 1 inch in depth. A long-toothed spike harrow was then dragged back and forth until the clay and broken stone were well mixed, and then the entire surface was watered and rolled with a two-ton horse roller. An occasional sprinkling of sand, since its completion, has prevented the clay from becoming muddy, and the surface is reasonably smooth and free from loose stone.

During the past year there have been used in building State roads 126,111 tons of broken stone and 26,287 cubic yards of gravel, and 176,437 cubic yards of earth and 2,298 cubic yards of rock excavation have been moved.

From the beginning of its work the commission has used 827,725 tons of broken stone and 241,770 cubic yards of gravel, and 1,372,613 cubic yards of earth and 39,750 cubic yards of rock have been moved. It is interesting to note that, if this amount of material were to be transported by rail, it would require 101,200 cars and 5,055 locomotives, and would make a train 800 miles in length.

#### GRADES.

By far the most serious defect in the old town highways is the heavy grades. These are not only a tax on the user, but they are a constant and burdensome cost to the municipalities having to care for them. The wash of storm water is much greater on heavy than on light grades, as is also the wear and tear due to the horses' feet. Taken as a whole, no one improvement makes a better return for the money invested than the cutting down of hills. Whatever is done in this direction becomes a permanent benefit, and, whatever the character of traffic, does not need to be done a second time. Still further, by carefully grading a road throughout its entire length between two centres of population or business, the possible load is in-

creased, notwithstanding no particular effort be made to improve the surface. Having these facts in mind, the commission is firmly convinced that frequently more immediate benefits will result from laying out longer sections of State road at one time, and doing the grading on these sections in advance of the gravel or macadamized surface. The commission is also satisfied that the cost of carrying on the work can be materially decreased under such a system, as it will be possible to advertise larger quantities of each class of construction, and receive the benefit of bids by contractors who may be especially prepared to profitably prosecute either the grading or the surfacing singly.

It may often happen, and probably will, that the surfacing may be done at the time of grading, with gravel moved short distances and at slight cost, and which will serve as a permanent roadway.

#### Cost.

The cost of building roads varies with the conditions, and in no two parts of the Commonwealth do the conditions agree; hence the great variation in the cost of State roads.

There are several reasons why the average cost of State roads in Massachusetts is greater than it is in other States. In its effort to accomplish the greatest good, the commission has undertaken to build the most difficult sections on long petitioned lines. In carrying out this policy it has been necessary to reduce heavy grades; to widen narrow roadways; to fill low places where they were overflowed by flood waters, or which were likely to fail in foundation on account of the nearness of ground water to surfacing; to build culverts for the quick removal of storm water; to place side drains for the removal of ground water; and to do many other things which increased the cost of building, but which would not appear on the finished road to the most careful observer.

It will thus appear that there are two distinct kinds of work in a first-class road: first, the surfacing; and second, the preparation for the surfacing and the placing of safeguards for its future protection. On some of the roads built under the direction of the commission the surfacing has not constituted a quarter of the cost, and in the hill or clay districts it is rarely the case that the surfacing has equalled one-half the entire cost.

As the work progresses, it should be done at a lower average cost, and a study of the tables in previous reports of the commission will show that this is precisely what has taken place. While a reduction in the cost of Massachusetts State roads has been and still is possible, it is not to be expected that it will be as low as in other States. The length of a working day in Massachusetts is by legislative act nine hours, or eleven per cent. shorter than in New Jersey, while the price of labor and teams is twenty per cent. higher; and the total cost is nearly one-third greater from these causes alone. The commission has in mind an economical prosecution of the work entrusted to it, but it believes that no false economy should permit the building of roads that fail to give the long-sought relief to the users or that will require heavy outlays for repairs.

In Appendix G will be found a table showing the cost per mile of roads built during the year 1900.

#### ┌ EFFECT OF STATE ROADS ON PROPERTY VALUES.

Do State roads increase the value of abutting property? is a question often asked of the commission. As a partial answer, it can be said that information has been received from distant parts of the State setting forth the fact that certain farm lands which were on the market for some years, without a customer, were sold shortly after the completion of the State road, and at prices above what they had been offered for. As there are neither steam nor electric railways within several miles of some of the pieces of property referred to, it is fair to assume that the judgment of the local informants, who attributed the sale and the rise in price to the State road, is correct.

Although it is difficult to obtain direct evidence as to a rise in the value of property, there is no lack of testimony as to the value of the roads to the users of them. From all parts of the State reports have been received which clearly show a material reduction in time between given points, a decrease in the number of horses on certain stage, mail and milk routes, and large increase in loads with the same number of horses. These results surely mean that the social conditions are improved, the cost of maintaining regular lines of transportation by highway is reduced, and the product of farms and isolated manufactories are moved in a manner to increase the margin of profit.

Real property is subject to the same laws, whether it be urban, suburban or rural. Its market value is regulated by its earning capacity, its nearness to beautiful or picturesque scenery, and still further by its religious, educational and social opportunities. A rise in value may follow an improvement of any one of these conditions, but it must follow a betterment of all. The commission is confident that the case is not misstated when it says that wherever a State road has been begun, a betterment along the lines suggested will follow its completion. }

#### MAINTENANCE.

Repairs of stone roads should begin the day they are opened to traffic, and the attention which they receive the first few months of use determines their usefulness and length of life. Long experience has clearly proved that better results are obtained, and at less cost by maintaining the roadway in good condition at all times, by a system of continuous small repairs, rather than by leaving it until it is practically worn out, and then thoroughly repairing. The commission has adopted the system of continuous repairs on all State highways. The cost of maintenance is about equally distributed over the roadway and roadside.

One of the chief sources of trouble in the roadway is raveling, and the consequent loose fragments of stone scattered over the surface. On lightly travelled ways this ravelling is more likely to occur than on roads with heavy traffic. Various expedients have been tried to prevent it. The only remedy which gives any degree of satisfaction is to sprinkle sand over the surface as often as needed. This coating of sand is a small fraction of an inch in thickness, and is spread over a width of about 8 feet in the centre of the roadway. Some of the roads exposed to the wind require treatment several times during each year, while less exposed ones demand but little attention.

Heaps of broken stone are scattered alongside of most of the State roads, to be used, as occasion requires, in filling slight depressions or in cases of emergency.

Experiments convince the commission that a thorough rolling with a steam roller, in the spring, after the frost is out, but before the sub-grade is dry, is one of the best means of keeping a stone road in good condition.



In building certain roads it was not deemed wise to import trap, to be used instead of a comparatively soft local stone. Two or three roads of this description have been broken up and resurfaced with trap, in order to reduce the cost of maintenance. In the roads referred to, the smaller fragments were ground up under the traffic, leaving the larger stones projecting through, and making a rough surface.

The repairs on the roadside consist of cutting brush and weeds, cleaning waterways and gutters to permit the free flow of water, trimming down or cutting small waterways through shoulders and filling washouts. On two of the State roads repairs are made by men employed for the purpose, who devote their entire time to it. One of these roads is 11 miles long, and passes through Yarmouth and Dennis and partly through Brewster. The other is in Huntington and Russell, and is 8 miles in length. These men furnish horses, wagons and tools, and such material found within the location as is suitable for repairs. The State furnishes the broken stone or gravel teamed from off the location. The Yarmouth-Brewster road costs \$600 and the Huntington-Russell road \$480 per year. Under this system the best possible results are obtained, and the roads are at all times in good condition. All other roads are cared for by local men working under the direction of a division engineer. As a rule, this last method is neither economical nor satisfactory, and it will be abandoned as rapidly as roads of sufficient length are completed to warrant it.

Dangerous defects are guarded by town officials and reported to the commission. Each State road is viewed by a division engineer at least once in two weeks, and its condition noted, and necessary repairs are at once made.

In accordance with chapter 432 of the Acts of 1900, the cost of repairs on State roads, not exceeding \$50 per mile, is to be paid by the towns and cities in which the roads are located.

The cost of maintenance is shown in Appendix H.

#### STATE ROLLERS.

The commission has bought 17 steam road rollers. Of these, 11 were by legislative act placed in specified towns and under the control of the county commissioners, the remaining 6 being at the disposal of the Highway Commission.

With a carefully matured plan, all of these rollers can be kept at work continuously during the road-building season. In order to do this, the proposed work in the different parts of the State must be laid out in such a manner that the rollers may be moved from one town to another without loss of time, which implies a knowledge of all work to be done and the power to direct it as far as may be necessary to accomplish these results.

The 6 rollers under the control of the commission have not been idle during the past year, having been used on repairs in 15 towns, on new State roads in 9 towns and on new town roads in 11 towns.

The 11 rollers in the hands of the county commissioners might have been used much more. Two of them have been housed during the entire season, and the remaining 9 have not done a full season's work.

In the opinion of the commission, more effective service would be had if all of the rollers owned by the State were placed at the disposal of the commission without the present division of responsibility.

#### SMALL TOWN ACT.

Chapter 432, section 2, of the Acts of 1900, directs that "Of the amount appropriated each year for the construction and repair of state highways, five per cent. shall be expended under the direction of the Massachusetts highway commission in such towns and in such amounts as it shall determine, in constructing or repairing highways in towns in which no state highway has been built. Such allotments and expenditures shall be made only upon petition of selectmen of towns, and any highway constructed or repaired under the provisions of this section shall remain a town highway and subject to all laws relating thereto: *provided*, that no town shall receive in one year a sum exceeding forty per cent. of its average appropriations for highway purposes for the five years next previous."

The commission has received 59 petitions under this act, and has allotted varying sums to 25 towns. The act was approved July 25, but not until August 29 did the commission have in its hands a sufficient number of petitions to use up the \$20,000 at its disposal. The allotments were made September 6.

Each petitioned road has been visited by one member of the commission, and the entire Board has viewed many of the roads. The views thus taken were made with the selectmen, and the character and extent of the proposed work determined after a careful study of the conditions and materials. The town officials are enthusiastic in this work, and many of the towns have agreed to build much longer pieces of road than would be possible with the allotments, meeting the shortages by appropriations from the town funds.

The character of the work to be done varies, but in most cases it has in mind more complete work to follow, although in some few instances the roadway is surfaced in a substantial manner, and is of a quality to thoroughly meet the demands of traffic. In several cases it is possible, by the use of small portable crushers, to break a stony gravel found in great abundance, and place it upon the road at a cost no greater than would result from the use of a much poorer gravel; the road thus built being practically a macadam road, the broken gravel being screened into three sizes by the use of screens with  $\frac{1}{2}$  inch,  $1\frac{1}{2}$  inch and  $2\frac{1}{2}$  inch meshes. The screened broken gravel is spread in courses, the largest size at the bottom, and covered by the successively smaller sizes. The sub-grade and each course is rolled separately, and the top, or finest, course is watered before rolling. Gravel pits which are near the road, and at one time used, but abandoned on account of the surplus large stone, are thus made available, the wasteful handling of useless stone is done away with, and the product is infinitely better than was the fine gravel as previously used.

Owing to the lateness of the season when this act went into effect, and the loss of time in preliminary studies before any work could be begun, only three of the roads have been completed. Eight of the roads are contracted for and will be finished early next year, and the remaining fourteen are well in hand, and will also be ready for use by July next.

It is expected that with the \$20,000 about 11 miles of town roads will be improved. While it is too early to pass judgment on this class of work, it is safe to say that, as a preliminary to more complete and permanent construction, it cannot fail to have a beneficial effect. The reduction of heavy grades, re-

building of troublesome waterways, filling over low and swampy places, draining wet soil and surfacing with gravel, crude or broken, cannot fail to increase the present usefulness and at the same time decrease the future cost.

The following is a partial list of the towns to which allotments have been made under this act, a description of the work done, contracted for or contemplated in each of said towns being also given : —

*Alford.* — A part of the main road leading from Alford to Great Barrington: gravel road; length, 672 feet; width of roadway, 16 feet; depth of gravel, 6 inches; cost to State, \$168.

*Bellingham.* — Road from Crooke's Corner, toward New York, New Haven & Hartford Railroad bridge, locally known as South Main Street: broken gravel road; gravel bank at side of road built; length, 2,000 feet; width of roadway, 15 feet; depth of gravel, 6 inches after rolling; maximum grade, 6 per cent.; 2,900 tons of gravel to the mile; gravel spread in two courses; sub-grade and each course rolled separately, and top course watered; cost to State, \$700.

*Bolton.* — The road from Bolton village to Hudson: length, 2,900 feet; grade and drainage improved; some rock excavation; a portion of the road surfaced with 6 inches of gravel; width of roadway, 15 to 20 feet; cost to State, \$500.

*Carver.* — Road from Carver railroad station toward Wareham: broken gravel road; gravel bank at side of road near southerly end; length, 1,950 feet; width of roadway, 15 feet; depth of gravel, 4 to 6 inches; maximum grade, 5 per cent.; 2,900 tons of gravel to the mile; gravel spread in two courses; sub-grade and each course rolled separately, and top course watered; cost to State, \$800.

*Danvers and Topsfield.* — New road around the hills, part of main road between Salem and Topsfield village: length of road in Danvers 4,000 feet, and in Topsfield 5,000 feet; grading, culverts, gravel surfacing; width of roadway, 24 feet; depth of gravel, 6 inches; maximum grade, 5 per cent.; gravel taken from excavation on line of road; cost to State, \$3,640.

*Hudson.* — A portion of the road from Hudson to Sudbury, over the Boston road, so called: regrading, reconstruction of culverts and shaping; total length of road, 17,350 feet; cost to State, \$3,000. The estimated cost of this work is \$4,900. This contemplates a very important and useful improvement to a road very much in use, and it is believed that by expending the estimated amount the road in question will be made very satisfactory.

*Halifax.* — The main road across Halifax, between Bridgewater



and Kingston : broken gravel road ; width of roadway, 15 feet ; depth of gravel, 6 inches after rolling ; grade, nearly flat ; sub-grade, sand ; 2,900 tons of gravel to the mile ; gravel spread in two courses ; sub-grade and each course rolled separately, and top course watered ; average haul of gravel,  $1\frac{1}{2}$  miles ; cost to State, \$300.

*Lakeville.* — From the Middleborough line, a part of the main road leading from Middleborough to New Bedford : broken gravel road ; gravel bank about one mile from southerly end of road ; length, 2,280 feet ; width of roadway, 15 feet ; depth of gravel, 6 inches after rolling ; maximum grade, 4 per cent. ; 2,900 tons of gravel to the mile ; gravel spread in two courses ; sub-grade and each course rolled separately, and top course watered ; cost to State, \$700.

*Mendon.* — A portion of the road from Hopedale to Mendon, locally known as the Milford road : improvement of grade and surface between two very long, steep hills ; length of road improved, 1,100 feet ; cost to State, \$660.

*Maynard.* — A portion of the road between Maynard and Stow, on the road leading from Boston to Fitchburg : work consists of regrading hill and improvement of double-arch stone bridge over Assabet River ; length of road graded, 3,250 feet ; cost to State, \$1,144.

*New Ashford.* — A portion of the main road leading from Williamstown to Pittsfield : work consisted in the reconstruction of a masonry culvert, in clearing out and lowering the bed of the brook and in placing some gravel surfacing near the culvert ; cost to State, \$100.

*Rochester.* — The main road from Rochester Centre toward Long Plain : macadam road, of local granitic rock ; length,  $1\frac{1}{2}$  miles ; width of roadway, 15 feet ; depth of stone, 6 inches after rolling ; maximum grade, 5 per cent. ; 2,900 tons of stone to the mile ; stone spread in three courses, from a dumping board ; sub-grade and each course rolled separately, and top course watered ; cost to State, \$1,500.

*Sheffield.* — A portion of the main road between Ashley Falls village and Sheffield village, commencing at the bridge over the Housatonic River near Ashley Falls village and extending northerly for the distance of about 1,100 feet : work consisted in raising the grade of the road to prevent its flooding during the spring freshets ; cost to State, \$1,000.

*Stow.* — A portion of the road between Maynard and Stow, on the road leading from Boston to Fitchburg : work to consist in the regrading of a hill and the reconstruction of a culvert over the brook ; length of road to be graded, 1,400 feet ; cost to State, \$446.

*Westford.* — A portion of the Boston road, so called : work to consist in regrading the road and surfacing it with 6 inches of gravel ; length of road, about 3,100 feet ; cost to State, \$1,400.

## ALLOTMENTS.

No single feature of the commission's work requires or receives the time and attention as does the allotting of money appropriated by each Legislature, and determining what roads are to be treated at once and what are to be left for future treatment. The act of 1894 directs that there shall be an equitable distribution of money appropriated, among the different counties, but limits the number of miles of road to be built in any one county in any one year to 10. From the beginning of its work and for a period of five years following, the commission allotted to each county a proportionate part of the available appropriation represented by the ratio between the miles of road in the county and the miles in the State. This method was modified two years ago, and since then both mileage and population have been taken into account, with a value of three to the mileage and one to the population.

It has been estimated by the commission that the building of about 1,800 miles of road by the State would furnish a system that includes all the important highways, and these, with the roads improved by the towns, would reach to all parts of the Commonwealth. A study of the map at the end of this report will show that the work has attained good headway, and that some of the roads between smaller centres of population are practically finished, while the longer lines connecting larger centres are well advanced.

The distribution of the work in such a manner as to improve various roads in each county and various parts of each main road, and to extend the roads thus begun until they form continuous lines, is, in the opinion of the commission, a wise policy. It removes the worst parts to the benefit of each entire line, and at the same time affords opportunity for the several town officers to observe the methods of building and note the physical, moral and social effect of well-built roads upon a community.

It must be remembered that not all of the 1,800 miles referred to are indicated on the map, even by petition; and, until they are so indicated, it is difficult to understand in its fullest extent the magnitude of the work undertaken by the Commonwealth. It must still further be remembered that the commission cannot act in the initiative, but only on petition of

county, city or town authorities; and without these petitions the commission is powerless to develop a comprehensive scheme that will extend to all parts of the Commonwealth.

For a more thorough discussion of the general principles governing the commission in its selection of roads, reference is made to Appendix E.

## EXPENDITURES.

The following is a summary of the expenditures of the Highway Commission from Dec. 21, 1899, to Dec. 1, 1900:—

## CONSTRUCTION EXPENDITURES.

TOWN OR CITY.	Year of Lay-out.	Amount.	Totals.
<i>Barnstable County.</i>			
Barnstable, . . . . .	1899	\$312 30	
Bourne, . . . . .	1898	82 45	
Chatham (1st), . . . . .	1899	60 16	
Chatham (2d), . . . . .	1899	106 97	
Dennis (1st), . . . . .	1900	2,932 87	
Dennis (2d), . . . . .	1900	1,555 85	
Harwich, . . . . .	1899	224 10	
Harwich (1st), . . . . .	1900	3,604 76	
Harwich (2d), . . . . .	1900	41 12	
Orleans, . . . . .	1900	2,662 43	
Sandwich, . . . . .	1900	292 01	
Truro, . . . . .	1895	17 15	
			\$11,892 17
<i>Berkshire County.</i>			
Cheshire, . . . . .	1899	\$8,293 89	
Cheshire, . . . . .	1900	4,669 48	
Dalton, . . . . .	1896	160 39	
Great Barrington, . . . . .	1897	65 43	
Hancock, . . . . .	1899	5,485 98	
Lee, . . . . .	1900	7,349 21	
Lenox, . . . . .	1899	8,930 69	
Lenox, . . . . .	1900	1,865 60	
North Adams, . . . . .	1900	277 96	
			37,098 63
<i>Bristol County.</i>			
Attleborough, . . . . .	1900	\$1,951 99	
Dartmouth, . . . . .	1900	6,649 31	
Easton, . . . . .	1900	2,767 88	
North Attleborough, . . . . .	1899	14 56	
Rehoboth, . . . . .	1899	2,707 88	
Seekonk, . . . . .	1900	1,069 46	
Somerset, . . . . .	1899	105 54	
Somerset, . . . . .	1900	7,691 22	
Taunton, . . . . .	1899	256 49	
Taunton, . . . . .	1900	4,652 67	
			27,867 00
<i>Amount carried forward,</i> . . . . .			\$76,857 80

CONSTRUCTION EXPENDITURES — *Continued.*

TOWN OR CITY.	Year of Lay-out.	Amount.	Totals.
<i>Amount brought forward,</i> . . . . .	. . . . .	. . . . .	\$76,857 80
<i>Dukes County.</i>			
Edgartown, . . . . .	1899	\$3,390 53	4,400 39
Edgartown, . . . . .	1900	1,009 86	
<i>Essex County.</i>			
Amesbury, . . . . .	1899	\$5,404 54	57,069 78
Andover, . . . . .	1899	11 09	
Andover, . . . . .	1900	4,352 95	
Hamilton, . . . . .	1899	1,161 97	
Hamilton, . . . . .	1900	5,628 38	
Haverhill, . . . . .	1899	1,381 73	
Lawrence, . . . . .	1897	11 29	
Methuen, . . . . .	1900	2,220 53	
Newbury, . . . . .	1899	2,744 65	
Newbury, . . . . .	1900	40 08	
North Andover, . . . . .	1900	4,177 60	
Saugus, . . . . .	1898-99	19,353 73	
Saugus (bridges), . . . . .	1898	8,990 24	
Swampscott, . . . . .	1897	1,591 00	
<i>Franklin County.</i>			
Ashfield, . . . . .	1898	\$1,319 11	23,364 25
Buckland, . . . . .	1900	3,896 36	
Erving, . . . . .	1899	588 81	
Erving, . . . . .	1900	4,617 72	
Greenfield, . . . . .	1900	1,072 40	
Montague, . . . . .	1899	6,756 01	
Whately, . . . . .	1899	5,113 84	
<i>Hampden County.</i>			
Brimfield, . . . . .	1899	\$354 42	17,010 08
Chester, . . . . .	1899	109 05	
Chester, . . . . .	1900	3,237 35	
Palmer, . . . . .	1899	623 84	
Palmer, . . . . .	1900	6,556 10	
Russell, . . . . .	1898	557 89	
Russell, . . . . .	1899	960 28	
Westfield, . . . . .	1900	4,611 15	
<i>Hampshire County.</i>			
Belchertown, . . . . .	1900	\$34 35	
Easthampton, . . . . .	1900	175 36	
Hadley, . . . . .	1899	4,415 29	
Northampton, . . . . .	1898	213 65	
Northampton, . . . . .	1899	4,008 42	
South Hadley, . . . . .	1899	683 78	
South Hadley, . . . . .	1900	5,380 26	
Ware, . . . . .	1897	33 32	
<i>Amounts carried forward,</i> . . . . .	. . . . .	\$14,944 43	\$178,702 30

CONSTRUCTION EXPENDITURES—*Continued.*

TOWN OR CITY.	Year of Lay-out.	Amount.	Totals.
<i>Amounts brought forward,</i>	.	\$14,944 43	\$178,702 30
Ware, . . . . .	1899	2,786 59	
Williamsburg, . . . . .	1898	3 27	
			17,734 29
<i>Middlesex County.</i>			
Acton, . . . . .	1899	\$9,165 39	
Acton, . . . . .	1900	3,339 99	
Ashby, . . . . .	1899	1,084 99	
Boxborough, . . . . .	1899	367 38	
Lexington, . . . . .	1900	3,012 66	
Lowell, . . . . .	1897	72 55	
Marlborough, . . . . .	1899	5,826 48	
Marlborough, . . . . .	1900	3,015 06	
Reading, . . . . .	1899	1,859 52	
Reading, . . . . .	1900	9 35	
Stoneham, . . . . .	1900	22 89	
Sudbury, . . . . .	1900	3,733 63	
Tewksbury, . . . . .	1900	5,063 29	
Townsend, . . . . .	1898	79 28	
Townsend (1st), . . . . .	1900	4,211 93	
Townsend (2d), . . . . .	1900	26 17	
Wayland (1st), . . . . .	1900	6,043 10	
Wayland (2d), . . . . .	1900	3,012 50	
Weston, . . . . .	1898-99	977 51	
Winchester, . . . . .	1900	6,536 01	
Woburn, . . . . .	1900	3,785 73	
			61,245 41
<i>Nantucket County.</i>			
Nantucket, . . . . .	1899	\$417 71	
Nantucket, . . . . .	1900	125 52	
			543 23
<i>Norfolk County.</i>			
Braintree, . . . . .	1900	\$37 45	
Cohasset, . . . . .	1899	517 30	
Cohasset, . . . . .	1900	3,802 38	
Milton, . . . . .	1899	5,138 92	
Milton, . . . . .	1900	110 84	
Norwood, . . . . .	1899	727 69	
Quincy, . . . . .	1898	7,824 80	
Walpole, . . . . .	1900	6,005 35	
Westwood, . . . . .	1899-1900	7,309 10	
Wrentham, . . . . .	1899	3,637 33	
Wrentham (1st), . . . . .	1900	2,195 93	
Wrentham (2d), . . . . .	1900	4,670 64	
			41,977 73
<i>Plymouth County.</i>			
Abington, . . . . .	1900	\$1,907 85	
Brockton, . . . . .	1899	117 67	
Brockton, . . . . .	1900	7,523 67	
Duxbury, . . . . .	1899	138 06	
<i>Amounts carried forward,</i>	.	\$9,687 25	\$300,202 96



CONSTRUCTION EXPENDITURES — *Concluded.*

TOWN OR CITY.	Year of Lay-out.	Amount.	Totals.
<i>Amounts brought forward, . . .</i>	<i>. . .</i>	\$9,687 25	\$300,202 96
Marion, . . . . .	1899	600 33	
Marshfield, . . . . .	1899	510 95	
Mattapoisett, . . . . .	1900	3,708 41	
Plymouth, . . . . .	1898	1,973 12	
Scituate, . . . . .	1900	4,331 12	
Whitman, . . . . .	1897	212 38	
			21,023 56
<i>Suffolk County.</i>			
Revere, . . . . .	1898	\$768 97	
Revere, . . . . .	1899	6,496 59	
Revere (bridges), . . . . .	1899	3,672 07	
			10,937 63
<i>Worcester County.</i>			
Barre, . . . . .	1899	\$179 03	
Barre, . . . . .	1900	98 56	
Blackstone, . . . . .	1899	745 61	
Blackstone, . . . . .	1900	786 82	
Brookfield, . . . . .	1898	201 83	
Brookfield, . . . . .	1900	4,386 17	
Fitchburg, . . . . .	1897	125 41	
Fitchburg, . . . . .	1900	3,763 84	
Gardner, . . . . .	1897	3,348 41	
Gardner, . . . . .	1900	1,917 02	
Grafton, . . . . .	1899	586 34	
Grafton, . . . . .	1900	2,319 38	
Hardwick, . . . . .	1897	43 32	
Harvard, . . . . .	1900	11 18	
Holden, . . . . .	1900	5,138 95	
Leicester, . . . . .	1899	7,266 19	
Lunenburg, . . . . .	1899	109 05	
Lunenburg, . . . . .	1900	3,115 26	
Millbury, . . . . .	1900	30 09	
New Braintree, . . . . .	1897	18 56	
Northborough, . . . . .	1900	669 18	
Paxton, . . . . .	1898	1 75	
Shrewsbury, . . . . .	1899	721 01	
Shrewsbury, . . . . .	1900	1,091 56	
Spencer, . . . . .	1897	6,196 27	
Spencer (1st), . . . . .	1900	3,876 01	
Spencer (2d), . . . . .	1900	1,264 78	
Sutton, . . . . .	1899	128 76	
Warren, . . . . .	1899	4,503 20	
Warren, . . . . .	1900	3,683 95	
West Brookfield (West), . . . . .	1899	1,311 34	
West Brookfield (East), . . . . .	1899	751 53	
West Brookfield, . . . . .	1900	5,319 51	
Westminster, . . . . .	1898	78 33	
Westminster, . . . . .	1899	109 05	
Worcester, . . . . .	1900	397 98	
			64,295 23
Total, . . . . .			\$396,459 38

## REPAIR AND MAINTENANCE EXPENDITURES.

TOWN OR CITY.	Amount.	Totals.
<i>Barnstable County.</i>		
Barnstable, . . . . .	\$145 83	
Bourne, . . . . .	61 12	
Brewster, . . . . .	201 40	
Chatham, . . . . .	128 43	
Dennis, . . . . .	253 16	
Harwich, . . . . .	126 35	
Sandwich, . . . . .	90 40	
Truro, . . . . .	157 49	
Yarmouth (North), . . . . .	197 73	
Yarmouth (South), . . . . .	417 95	
		\$1,779 86
<i>Berkshire County.</i>		
Adams, . . . . .	\$133 66	
Cheshire, . . . . .	4 70	
Dalton, . . . . .	828 94	
Great Barrington, . . . . .	1,734 81	
Hancock, . . . . .	1,032 84	
Lee, . . . . .	91 22	
Lenox, . . . . .	163 29	
North Adams, . . . . .	776 08	
Pittsfield, . . . . .	930 56	
Richmond, . . . . .	116 37	
Williamstown, . . . . .	235 85	
Windsor, . . . . .	1 42	
		6,049 74
<i>Bristol County.</i>		
Acushnet, . . . . .	\$21 66	
Dartmouth, . . . . .	16 00	
Fairhaven, . . . . .	70 40	
North Attleborough, . . . . .	177 16	
Rehoboth, . . . . .	64 48	
Somerset, . . . . .	64 61	
Taunton, . . . . .	35 32	
Westport, . . . . .	133 55	
		583 18
<i>Dukes County.</i>		
Cottage City, . . . . .	\$913 98	
Edgartown, . . . . .	13 86	
Tisbury, . . . . .	165 02	
West Tisbury, . . . . .	128 07	
		1 220 93
<i>Essex County.</i>		
Amesbury, . . . . .	\$54 11	
Andover, . . . . .	335 06	
Beverly, . . . . .	210 50	
Gloucester, . . . . .	238 72	
Hamilton, . . . . .	3 28	
Haverhill, . . . . .	2 00	
Lawrence, . . . . .	62 84	
Merrimac, . . . . .	79 00	
<i>Amounts carried forward, . . . . .</i>	\$10,619 22	\$9,633 71

REPAIR AND MAINTENANCE EXPENDITURES — *Continued.*

TOWN OR CITY.	Amount.	Totals.
<i>Amounts brought forward, . . . . .</i>	\$10,619 22	\$9,633 71
Methuen, . . . . .	127 50	
Newbury, . . . . .	2 60	
Newburyport, . . . . .	229 43	
Saugus, . . . . .	278 26	
Swampscott, . . . . .	204 73	
Wenham, . . . . .	57 02	
West Newbury, . . . . .	368 96	
		2,254 01
<i>Franklin County.</i>		
Ashfield, . . . . .	\$260 29	
Buckland, . . . . .	281 17	
Charlemont, . . . . .	243 96	
Colrain, . . . . .	102 58	
Deerfield, . . . . .	257 28	
Erving, . . . . .	62 67	
Greenfield, . . . . .	2 92	
Montague, . . . . .	65 28	
Orange, . . . . .	240 64	
Shelburne, . . . . .	201 40	
Sunderland, . . . . .	13 60	
Whately, . . . . .	3 87	
		1,735 66
<i>Hampden County.</i>		
Brimfield, . . . . .	\$292 25	
Chester, . . . . .	128 79	
Chicopee, . . . . .	641 21	
Monson, . . . . .	33 42	
Palmer, . . . . .	5 25	
Russell, . . . . .	1,190 39	
Westfield, . . . . .	686 44	
West Springfield, . . . . .	199 59	
Wilbraham, . . . . .	56 72	
		3,234 06
<i>Hampshire County.</i>		
Easthampton, . . . . .	\$63 02	
Goshen, . . . . .	165 14	
Granby, . . . . .	126 42	
Hadley, . . . . .	232 08	
Huntington, . . . . .	677 07	
Northampton, . . . . .	210 93	
South Hadley, . . . . .	540 65	
Ware, . . . . .	159 82	
Williamsburg, . . . . .	115 73	
		2,290 86
<i>Middlesex County.</i>		
Acton, . . . . .	\$23 95	
Ashby, . . . . .	255 23	
Bedford, . . . . .	10 05	
<i>Amounts carried forward, . . . . .</i>	\$19,437 53	\$19,148 30



REPAIR AND MAINTENANCE EXPENDITURES — *Continued.*

TOWN OR CITY.	Amount.	Totals.
<i>Amounts brought forward, . . . . .</i>	\$19,437 53	\$19,148 30
Boxborough, . . . . .	105 49	
Chelmsford, . . . . .	193 96	
Concord, . . . . .	55 00	
Lexington, . . . . .	186 11	
Lincoln, . . . . .	151 67	
Lowell (North), . . . . .	32 75	
Lowell (South), . . . . .	226 87	
Marlborough, . . . . .	81 65	
North Reading, . . . . .	5 01	
Reading, . . . . .	26 12	
Stoneham, . . . . .	54 46	
Sudbury, . . . . .	77 15	
Tewksbury, . . . . .	2 82	
Townsend, . . . . .	215 70	
Tyngsborough, . . . . .	320 26	
Watertown, . . . . .	239 57	
Wayland, . . . . .	35 51	
Weston, . . . . .	85 11	
Winchester, . . . . .	94 33	
		2,478 77
<i>Nantucket County.</i>		
Nantucket, . . . . .		174 18
<i>Norfolk County.</i>		
Cohasset, . . . . .	\$29 62	
Holbrook, . . . . .	56 07	
Milton, . . . . .	21 11	
Norfolk, . . . . .	40 80	
Norwood, . . . . .	137 13	
Quincy, . . . . .	2 46	
Walpole, . . . . .	224 53	
Westwood, . . . . .	73 14	
Weymouth, . . . . .	129 52	
Wrentham, . . . . .	67 03	
		781 41
<i>Plymouth County.</i>		
Brockton, . . . . .	\$221 95	
Duxbury, . . . . .	82 18	
Hingham, . . . . .	204 28	
Marion, . . . . .	98 03	
Marshfield, . . . . .	32 77	
Mattapoisett, . . . . .	128 38	
Middleborough, . . . . .	83 35	
Plymouth, . . . . .	557 22	
Scituate, . . . . .	78 41	
Wareham, . . . . .	54 94	
Whitman, . . . . .	126 09	
		1,667 60
<i>Amount carried forward, . . . . .</i>		\$24,250 26

REPAIR AND MAINTENANCE EXPENDITURES—*Concluded.*

TOWN OR CITY.	Amount.	Totals.
<i>Amount brought forward,</i> . . . . .	. . . . .	\$24,250 26
<i>Suffolk County.</i>		
Revere (East), . . . . .	\$72 56	
Revere (West), . . . . .	229 82	
		302 38
<i>Worcester County.</i>		
Athol, . . . . .	\$166 45	
Auburn, . . . . .	336 18	
Barre, . . . . .	25 20	
Blackstone, . . . . .	87 06	
Brookfield, . . . . .	188 16	
Fitchburg, . . . . .	128 43	
Gardner, . . . . .	263 42	
Grafton, . . . . .	78 90	
Hardwick, . . . . .	25 42	
Holden, . . . . .	102 53	
Leicester, . . . . .	4,713 90	
Lunenburg, . . . . .	83 48	
New Braintree, . . . . .	10 89	
Northborough, . . . . .	63 58	
Paxton, . . . . .	419 37	
Phillipston, . . . . .	83 33	
Princeton, . . . . .	152 03	
Shrewsbury, . . . . .	122 45	
Sterling, . . . . .	187 38	
Sturbridge, . . . . .	9 06	
Sutton, . . . . .	2 44	
Templeton, . . . . .	71 85	
Uxbridge, . . . . .	79 82	
Warren, . . . . .	250 18	
Westborough, . . . . .	85 50	
West Boylston, . . . . .	536 72	
West Brookfield, . . . . .	4 80	
Westminster, . . . . .	420 56	
Worcester, . . . . .	310 08	
		9,009 17
Total, . . . . .	. . . . .	\$33,561 81

## GENERAL OFFICE EXPENSES, DEC. 21, 1899, TO DEC. 1, 1900.

[Under Acts of 1900, Chapter 141.]

Salaries of commissioners, . . . . .	\$5,499 99
Travel of commission, . . . . .	877 38
Salaries of clerical assistants and chief, first and second assistant engineers, . . . . .	14,072 67
<i>Amount carried forward,</i> . . . . .	\$20,450 04

<i>Amount brought forward,</i> . . . .	\$20,450 04	
Printing, including postal cards and stamped envelopes, . . . . .	770 73	
Advertising hearings, . . . . .	93 24	
Office supplies, . . . . .	414 72	
Telephone, including tolls, . . . . .	242 92	
Postage, . . . . .	207 48	
Examining titles, . . . . .	23 00	
Recording land takings and easements, . . . . .	42 01	
Expenses in Graves-Brown case, Swampscott, . . . . .	1,137 03	
Expenses in Booth case, Whitman, . . . . .	24 00	
Miscellaneous items, including telegraph and express charges, car fares and minor office expenses, . . . . .	231 84	
	<hr/>	\$23,637 01

## [Under Acts of 1899, Chapter 367.]

Travel of commission, . . . . .	\$9 00	
Advertising hearings, . . . . .	10 21	
Telephone tolls, . . . . .	5 60	
Office supplies, . . . . .	13 50	
Expenses in Booth case, Whitman, . . . . .	35 65	
Miscellaneous items, . . . . .	2 70	
	<hr/>	76 66

## ROAD MACHINERY.

## [Under Acts of 1899, Chapter 396.]

One steam roller, . . . . .	1,985 00
-----------------------------	----------

## EXPENDITURES UNDER "SMALL TOWN ACT."

## [Acts of 1900, Chapter 432.]

Town of New Ashford, . . . . .	100 00
--------------------------------	--------

Total expenditure from Dec. 20, 1899, to Dec. 1, 1900, . \$455,819 86

W. E. McCLINTOCK.  
HAROLD PARKER.  
JOHN H. MANNING.



---

---

# APPENDIX.

---

---





## APPENDIX A.

---

### REPORT OF CHIEF ENGINEER.

BOSTON, MASS., Dec. 31, 1900.

*To the Massachusetts Highway Commission.*

GENTLEMEN:—I submit the following report on the work done during the year 1900.

The past year has been favorable for road construction. Though the 1900 appropriation was not available until late in the season, the late fall permitted the completion of many roads for which allotments from this appropriation were made. Had the appropriation been available by April 1, all the work could have been completed by December 1.

All the work laid out prior to the 1900 appropriation has been completed, with the exception of that in Brockton, Harvard and Montague.

The State road in Hancock, which joins the State highway in New York, has been completed.

The Salem Turnpike in the towns of Revere and Saugus has been reconstructed.

The only new road laid out was in the town of Harvard, where the location was changed, owing to the expense of reducing the grades of the old road.

The Legislature of 1900 appropriated \$500,000 for State highways; of this, \$400,000 was for construction and maintenance in 1900, and the remaining \$100,000 for work in 1901.

Construction work during the past year has been carried on under 113 contracts, covering 127 lay-outs, made in 10 cities and 78 towns.

The following statement exhibits the construction work done in the year 1900 : —

Excavation and borrow (cubic yards), . . . . .	176,436.60	
Ledge excavation (cubic yards), . . . . .	2,298.17	
Culverts built, . . . . .	237	
Bridges built, . . . . .	3	
Dry masonry (cubic yards), . . . . .	2,089.90	
Cement masonry (cubic yards), . . . . .	1,398.28	
Gravel (cubic yards, including 4,180 yards screened), . . . . .	26,287.40	
Telford (square yards), . . . . .	11,300.00	
Shaping (square yards), . . . . .	413,185.40	
Macadam and gravel surfacing (square yards), . . . . .	431,518.00	
Broken stone (tons), . . . . .	126,110.62	
Guard rail (lineal feet), . . . . .	32,508.30	
Side drains (lineal feet), . . . . .	34,977.80	
Side drain outlets (lineal feet), . . . . .	1,758.60	
Vitrified clay pipe (lineal feet), {	smaller than 12-inch, . . . . .	1,109.10
	12-inch, . . . . .	4,804.80
	15-inch, . . . . .	414.60
	18-inch, . . . . .	724.80
	20-inch, . . . . .	286.00
Iron pipe (lineal feet), . . . . . {	24-inch, . . . . .	454.60
	10-inch, . . . . .	108.50
	12-inch, . . . . .	606.20
	15-inch, . . . . .	48.50
	16-inch, . . . . .	24.00
	18-inch, . . . . .	85.90
	24-inch, . . . . .	140.60
Stone bounds set, . . . . .	1,110	
Catch-basins built, . . . . .	97	

#### WORK OF SURVEYING DEPARTMENT.

During the year 1900 surveys have been made in 53 towns, — a total length of 54.9 miles. These have been complete in all details, and points have been set for stone bounds defining the side lines of location. All the walls, fences, ditches, bounds, etc., have been located; also the boundaries of the roads and division lines of abutting property; all houses within 100 feet of the line of location and all cross streets for the distance of 200 feet from the line of location; as well as a complete set of cross-sections of the road, taken at 50-foot intervals, with sufficient additional sections to show the amount of earthwork necessary in grading the road.

Grade stakes for construction have been set in 61 towns, — a total length of 67 miles.

Final surveys have been made in 53 towns, — a total length of 43.1 miles.

Plans, profiles and cross-sections have been plotted for 68.7 miles of road.

Estimates have been prepared for 108.5 miles of road, in 123 towns. Final estimates have been made for 65 contracts.

Decree plans and profiles for street railways in 15 towns have been prepared, — a total length of 11.1 miles.

For the work under the "small town" act of 1900, 18 surveys have been made; plans, profiles and cross-sections have been plotted and estimates made.

Record plans have been made for all work completed in 1899.

In addition to the regular work of the commission, surveys, plans, profiles, cross-sections, estimates and specifications have been made for 4 miles of road for the use of towns which have built or are building macadam roads in conjunction with the work of the commission.

#### BRIDGES.

To replace an old pile bridge, during the past year a pile bridge 119.33 feet in length, with a brick pavement surface, has been built over the Pines River at the Saugus-Revere line, Salem Turnpike. To replace old pile bridges, in Revere a bridge 23.5 feet in length has been built and in Saugus a bridge 23.5 feet in length, both of I-beam construction, with brick arches and concrete, the surface being of macadam.

On the 1899 lay-out in Haverhill there is under construction an I-beam bridge having a 13-foot span, to replace a wooden trestle 113 feet in length. On the same lay-out is being built a 6 by 8 foot culvert, to replace a wooden trestle 66 feet in length.

Studies are being made for a 40-foot plate girder bridge in Williamsburg, and for a change in the location of the channel of the Mill River, to obviate the necessity of rebuilding two more bridges in the same town.

#### MAINTENANCE.

The very heavy rains last February caused serious damage in Great Barrington and West Boylston. Other than these, there have been no damaging storms; but the dry summer

weather caused the stone on many of the roads to unravel, making it necessary to spread binding material and in some cases to water.

On most of the roads stone for future repairs has been stacked, as in early spring, when stone for repairs is most needed, the crushers are not in operation.

The tendency of the travel to spread over the entire width of the roads is increasing, the only exception being at South Hadley, where no sooner is one horse track filled than another is started. As this was a very poor road before reconstruction, the unwillingness to assist in maintaining it seems to show a lack of appreciation.

As yet the necessities of travel have not required widening the macadam on any of the roads, and the width of 12 feet would be wide enough for the majority of country roads, provided suitable material could be used for the construction of the shoulders.

A depth of 6 inches of stone seems sufficient where the foundation is of sand or gravel and well drained. In the construction of a section of the road in Leicester, as suitable gravel could be obtained only at great expense, 6 inches of broken stone was used on the sub-grade in place of gravel or telford. The result has been perfectly satisfactory, and in Spencer the same method of construction has been followed.

To obviate the necessity of constructing guard rail, wherever practicable it has been the custom to grade the slopes of embankment with a 4 to 1 slope, the idea being not so much to save the first cost of the guard rail as the cost of its maintenance. Whenever surplus material is taken from the gutters, it is customary to place it on embankments where guard rail has been built, so that eventually the guard rail may be removed, unless the embankment is so high as to be dangerous.

In the construction of many of the roads it is often necessary to put in pipes for drainage at a depth of less than 2 feet below the surface of the road. This does not allow a sufficient depth of covering for vitrified pipe, which is likely to be broken by the action of the roller, so iron pipe is used instead.

During the year 1899 most of the guard rail previously built on all the State roads was repainted. Following is a statement of the average cost per lineal foot, etc.: —



Lineal feet of guard rail painted, . . . . .	350,330
Cost of paint, not including freight, per gallon, . . . . .	\$1.0500
Cost of paint per lineal foot of guard rail, . . . . .	.0084
Cost of paint and painting per lineal foot of guard rail, . . . . .	.0165
Lineal feet of guard rail painted, per gallon, . . . . .	134.4
Quantity of paint used per lineal foot (gallon), . . . . .	.0077
Time required for painting, per lineal foot (hour), . . . . .	.0269

To ascertain the changes that have taken place in the cross-sections of roads between the time of their completion and approval by the commission and the present time, in December of this year cross-section notes were taken on 40 sections of State highway in 17 towns in different parts of the State, built each year from 1894 to 1899 inclusive. On these 40 sections of road the elevation in the middle of the road averages 1.03 inches lower than the original elevation. The crown, which originally averaged .67 of an inch per foot, at present averages .47 of an inch per foot, — a loss of about 30 per cent. from the original crown.

The following statement shows the changes in the cross-sections on the different lay-outs :—

LAY-OUTS.	Number of Sections of Road.	Original Crown (Inches Per Foot).	Present Crown (Inches Per Foot).
1895, . . . . .	7	.694	.500
1896, . . . . .	9	.583	.514
1897, . . . . .	12	.645	.500
1898, . . . . .	7	.625	.500
1899, . . . . .	2	.688	.625

The foregoing figures seem to show that the standard section adopted by the commission, giving a crown of  $\frac{3}{4}$  of an inch per foot, is not excessive, as the crown of a road is sure to lessen by the effects of travel and weather.

#### GRAVEL ROADS.

Roads built of screened gravel, the stone of which corresponds in size to the stone used in macadam construction, have given good satisfaction. The roads of this type in West Boylston, Colrain and Brimfield have caused but little trouble by unravelling, but the wear is more marked than on the macadam

roads. The road in Richmond has worn well, as the gravel used in its construction was of very good quality.

Many prefer gravel roads to macadam to drive over. They keep in good condition the greater part of the year, but in spring and fall, if there is much rain and cloudy weather, the gravel road dries out slowly and ruts easily form. This occasions more or less adverse criticism, and requests are made for macadam construction.

The screened gravel roads are easily maintained, but wear rapidly, and, as the cost of resurfacing is nearly as great as the cost of resurfacing a macadam road, it does not seem to be economy to continue their construction, except in localities where stony gravel is abundant and broken stone obtainable only at great expense.

In the first of the accompanying tables, in which the figures are given in feet, are shown the maximum width of the travelled way and the width commonly used for travel on the different roads. In the second table are shown the highways laid out, constructed or contracted for by the commission, and the nature of the several constructions, to Jan. 1, 1901.

Respectfully submitted,

CHAS. MILLS,  
*Chief Engineer.*

TABLE SHOWING WIDTHS OF TRAVELLED WAY.

TOWN OR CITY.	County.	Width of Macadam.	MAXIMUM WIDTH OF TRAVELLED WAY.				WIDTH OF COMMONLY TRAVELED WAY.					
			1896.	1897.	1898.	1899.	1900.	1896.	1897.	1898.	1899.	1900.
Abington, . . . . .	Plymouth, . . . . .	15	-	-	-	-	18	-	-	-	-	12
Acton, . . . . .	Middlesex, . . . . .	15	-	-	-	13	13	-	-	-	10	8
Acushnet, . . . . .	Bristol, . . . . .	15	-	15	13	12-15	15	-	12	9	7-9	12
Adams, . . . . .	Berkshire, . . . . .	15	-	-	11	11	10	-	-	7	7	7
Amesbury, . . . . .	Essex, . . . . .	15	-	-	-	-	15	-	-	-	-	9
Andover (N.), . . . . .	Essex, . . . . .	18	24	24	24	26	25	24	20	16	20	18
Andover (S.), . . . . .	Essex, . . . . .	15	-	-	11	13	15	-	-	8	10	10
Ashby, . . . . .	Middlesex, . . . . .	15-18-20	12	12	12	14	14	9	9	9	10	10
Ashfield, . . . . .	Franklin, . . . . .	Gravel,	-	-	16	12	13	-	-	10	9	10
Attleborough, . . . . .	Bristol, . . . . .	Gravel,	-	-	-	-	9	-	-	-	-	7
Athol, . . . . .	Worcester, . . . . .	17	16	16	20	18	20	10-12	12	14	14	14
Auburn, . . . . .	Worcester, . . . . .	15-18	12	13	14	15	15	9	9	10	10	10
Barnstable (N.), . . . . .	Barnstable, . . . . .	15	-	-	-	10	10	-	-	-	7	7
Barnstable (S.), . . . . .	Barnstable, . . . . .	15-18	-	-	21	18-21	21	-	-	12	15	15
Barre, . . . . .	Worcester, . . . . .	15	-	13	14	14	14	-	9	7	8	9
Bedford, . . . . .	Middlesex, . . . . .	15	-	12	15	15	15	-	8	10	9	10
Beverly, . . . . .	Essex, . . . . .	18	20-24	22	24	20-25	25	20	16	15	14-20	12-20
Blackstone, . . . . .	Worcester, . . . . .	15	-	-	-	11	13-16	-	-	-	8.5	9-11
Bourne, . . . . .	Barnstable, . . . . .	15	-	10	18	12-15	15	-	8	9	9	12

TABLE SHOWING WIDTHS OF TRAVELLED WAY --- Continued.

TOWN OR CITY.	County.	Width of Macadam.	MAXIMUM WIDTH OF TRAVELLED WAY.					WIDTH OF COMMONLY TRAVELLED WAY.				
			1896.	1897.	1898.	1899.	1900.	1896.	1897.	1898.	1899.	1900.
Boxborough, . . . . .	Middlesex, . . . . .	15	12	13	14	14	-	8	10	10	9	
Brewster, . . . . .	Barnstable, . . . . .	15	12	12	12	12	-	9	9	9	9	
Brimfield, . . . . .	Hampden, . . . . .	Gravel,	-	11	15	15	-	-	8	11	9	
Brockton (W.), . . . . .	Plymouth, . . . . .	16	18	12	18-21	18-21	-	12	9	12	12	
Brockton (E.), . . . . .	Plymouth, . . . . .	15	-	-	-	18	-	-	-	-	12	
Brookfield, . . . . .	Worcester, . . . . .	15	12	12	12.5-16	12	-	9	9	8.5-11	8	
Buckland, . . . . .	Franklin, . . . . .	1-	10	10	15	15	7-9	8	8	8-9	8-9	
Charlemont, . . . . .	Franklin, . . . . .	15-21	-	15	15	15	-	10	10	10	12	
Chatham, . . . . .	Barnstable, . . . . .	12-15	-	-	-	12	12-15	-	-	9	9	
Chelmsford, . . . . .	Middlesex, . . . . .	18	-	-	-	16	16	-	-	12	10	
Cheshire, . . . . .	Berkshire, . . . . .	15	-	-	-	-	9	-	-	-	6-8	
Chester, . . . . .	Hampden, . . . . .	15	-	-	-	12	12	-	-	10	10	
Chicopee, . . . . .	Hampden, . . . . .	20	20	20	20	20	-	12	12	13	14	
Cohasset, . . . . .	Norfolk, . . . . .	15	-	10	12	12-15	-	-	7	7	9	
Colrain, . . . . .	Franklin, . . . . .	Gravel,	-	-	-	14	14	-	-	8	9	
Concord, . . . . .	Middlesex, . . . . .	15	15	15	16	15	-	10	10	11	10	
Cottage City, . . . . .	Dukes, . . . . .	15	21	10	13	12	12	15	7	9	9	
Dalton, . . . . .	Berkshire, . . . . .	15	20	21	16-21	22	20	16	18	12-18	18	
Dartmouth, . . . . .	Bristol, . . . . .	18	-	-	15-18	15-18	-	-	-	12	12	

Deerfield, . . . . .	Franklin, . . . . .	15	12-14	14	16	16	16	17	11	12	12	12	13
Dennis (N.), . . . . .	Barnstable, . . . . .	15	-	12	15	12-15	12-15	12-15	-	9	7	9	9
Dennis (S.), . . . . .	Barnstable, . . . . .	15	-	-	-	-	-	15-18	-	-	-	-	12
Duxbury, . . . . .	Plymouth, . . . . .	15	12-14	12	10	12	12	12	7	9	7	7	9
Easthampton, . . . . .	Hampshire, . . . . .	15	12-13	12	14	15	15	15	9-10	10	10	10	12
Easton, . . . . .	Bristol, . . . . .	15	-	-	-	-	-	12	-	-	-	-	9
Edgartown, . . . . .	Dukes, . . . . .	15	-	21	10	12	12	12	-	15	7	8	9
Erving, . . . . .	Franklin, . . . . .	Gravel,	-	-	-	10	10	10	-	-	-	7	7
Fairhaven, . . . . .	Bristol, . . . . .	15	-	18	18	15-18	15-18	18	-	12	10	12	12
Fitchburg (E.), . . . . .	Worcester, . . . . .	15-18	-	-	18	18	18	20	-	-	15	16	16
Fitchburg (W.), . . . . .	Worcester, . . . . .	15	15	14	18	18	18	18	10	10	15	14	15
Gardner, . . . . .	Worcester, . . . . .	15	-	12	15	14	14	14	-	8	10	9	10
Gloucester, . . . . .	Essex, . . . . .	15	15	17	18	18	18	18	15	13	12	12	10
Goshen, . . . . .	Hampshire, . . . . .	15	10	11	10	12	12	12	7	8	7	8	9
Grafton, . . . . .	Worcester, . . . . .	15	-	11	14	15	15	16	-	9	10	12.5	12
Granby, . . . . .	Hampshire, . . . . .	15	9	14	14	13	13	13	5	10	8	8	8
Great Barrington, . . . . .	Berkshire, . . . . .	15-18	-	25	25	15-20	15-20	21	-	12	14	12-15	15
Great Barrington, . . . . .	Berkshire, . . . . .	Gravel,	-	-	25	15	15	16	-	-	11	12	12
Greenfield, . . . . .	Franklin, . . . . .	18	-	-	-	18	18	18	-	-	-	10	11
Hadley, . . . . .	Hampshire, . . . . .	15	15-18	14-17	18	18	18	18	10	10	10	10	10
Hamilton, . . . . .	Essex, . . . . .	15	-	-	-	14	14	14	-	-	-	10	9
Hancock, . . . . .	Berkshire, . . . . .	Gravel,	-	18	11	12	12	14	-	8	9	8-10	11

<sup>1</sup> Widths of macadam, 12, 15, 18, 24.







TABLE SHOWING WIDTHS OF TRAVELLED WAY — *Continued.*

TOWN OR CITY.	County.	Width of Macadam.	MAXIMUM WIDTH OF TRAVELLED WAY.					WIDTH OF COMMONLY TRAVELLED WAY.				
			1896.	1897.	1898.	1899.	1900.	1896.	1897.	1898.	1899.	1900.
Hardwick, . . . . .	Worcester, . . . . .	15	-	-	15	15	14	-	-	8	8	9
Harwich, . . . . .	Barnstable, . . . . .	15	-	-	-	10	12-15	-	-	-	7	9
Hingham (W.), . . . . .	Plymouth, . . . . .	Gravel,	17	15	15	12-18	18	10	9	10	9	12
Hingham (E.), . . . . .	Plymouth, . . . . .	15	-	10	10	10-12	12-15	-	8	7	7-9	9
Holbrook, . . . . .	Norfolk, . . . . .	15	-	12	9	12	11	-	8	7	9	8
Holden, . . . . .	Worcester, . . . . .	15-18	13-18	11	14	15	15-18	10	9	10	12	10-12
Huntington, . . . . .	Hampshire, . . . . .	15	9	11	11	12	12	7	8	9	8	7
Lawrence, . . . . .	Essex, . . . . .	18	-	21	21	25	25	-	17	16	18	18
Lee, . . . . .	Berkshire, . . . . .	15-24	15-21	17	19	14-20	20	12-15	11	13	10-14	12
Leicester, . . . . .	Worcester, . . . . .	15-18-24	15	20	25	18-21	18-21	10-12	12	15	13-18	13-18
Lenox, . . . . .	Berkshire, . . . . .	15	-	-	-	-	14	-	-	-	-	12
Lexington (W.), . . . . .	Middlesex, . . . . .	15	15-20	16	15	15	15	15	12	10	11	10
Lexington (E.), . . . . .	Middlesex, . . . . .	15	-	-	-	-	14	-	-	-	-	9
Lincoln, . . . . .	Middlesex, . . . . .	15	15	15	15	15	15	10	9	10	10	9
Lowell (N.), . . . . .	Middlesex, . . . . .	15	-	15-25	25	25	20	-	9-12	10	10-15	9
Lowell (S.), . . . . .	Middlesex, . . . . .	18	-	18	20	22	18	-	12	12	16	12
Lunenburg, . . . . .	Worcester, . . . . .	15	-	-	-	15	18	-	-	-	12	12
Marion (E.), . . . . .	Plymouth, . . . . .	15	15	18	15	12-15	15	10	9	10	9	12
Marion (W.), . . . . .	Plymouth, . . . . .	15	-	12	15	12-15	15	-	9	10	9	12

Marlborough (E.), .	.	.	.	.	.	.	.	.	.	15	-	-	12	14	15	-	-	10	10	9
Marlborough (W.),	.	.	.	.	.	.	.	.	.	15	-	-	14	14	14	-	-	10	11	11
Marshfield, .	.	.	.	.	.	.	.	.	.	15	14	12	11	12	12	8	9	7	7	9
Mattapoisett, .	.	.	.	.	.	.	.	.	.	15	-	18	15	15-18	15-18	-	12	10	12	12
Merrimac, .	.	.	.	.	.	.	.	.	.	15	-	12	12	13	15	-	9	9	10	10
Methuen, .	.	.	.	.	.	.	.	.	.	15	-	15	15	18	18	-	10	12	13	12
Middleborough, .	.	.	.	.	.	.	.	.	.	15	25-30	12-21	21	12-24	12-24	20-25	9-21	10	9-15	7-15
Milton, .	.	.	.	.	.	.	.	.	.	24	-	-	-	-	21	-	-	-	-	12-15
Monson, .	.	.	.	.	.	.	.	.	.	15	12	14	15	19	17	8-10	10	10	14	11
Montague, .	.	.	.	.	.	.	.	.	.	15	-	-	9	9	10	-	-	7	7	7
Nantucket, .	.	.	.	.	.	.	.	.	.	12-15	-	21	15	12-15	12-15	-	8	7	7-9	9
New Braintree, .	.	.	.	.	.	.	.	.	.	15	-	-	15	15	14	-	-	8	8	9
Newbury, .	.	.	.	.	.	.	.	.	.	15	-	-	-	-	20	-	-	-	-	10
Newburyport, .	.	.	.	.	.	.	.	.	.	15	15	13	13	14	18	8-10	9	10	11	10
Norfolk, .	.	.	.	.	.	.	.	.	.	15	10	10	9	9-12	12	10	7	7	7-9	9
North Adams, .	.	.	.	.	.	.	.	.	.	15	10-12	13	14	15-20	20	8-10	9	10	12	14
Northampton (Bridge Street), .	.	.	.	.	.	.	.	.	.	20	18	18	18	18	18	12	14	12	14	14
Northampton (E.),	.	.	.	.	.	.	.	.	.	15	-	12	18	16	16	-	10	12	12	12
North Andover, .	.	.	.	.	.	.	.	.	.	15	-	-	-	-	15	-	-	-	-	10
North Attleborough, .	.	.	.	.	.	.	.	.	.	15-24	15-20	18	21	12-21	12-24	10-15	15	12	9-15	10-15
North Attleborough, .	.	.	.	.	.	.	.	.	.	Gravel,	-	6	8	9-12	9-15	-	6	6	7-9	7-9
Northborough, .	.	.	.	.	.	.	.	.	.	15	-	12	14	14	14	-	8	10	11	11
North Reading, .	.	.	.	.	.	.	.	.	.	15	-	-	11	12	13	-	-	8	10	8

TABLE SHOWING WIDTHS OF TRAVELLED WAY — *Continued.*

TOWN OR CITY.	County.	Width of Macadam.	MAXIMUM WIDTH OF TRAVELLED WAY.				WIDTH OF COMMONLY TRAVELED WAY.					
			1896.	1897.	1898.	1899.	1900.	1896.	1897.	1898.	1899.	1900.
Norwood (N.),	Norfolk,	15	-	16	16	15-18	15-18	-	10	10	10	10-12
Norwood (S.),	Norfolk,	15	-	-	12	12	15	-	-	9	9	10
Orange,	Franklin,	17	16	16	20	20	20	10-12	12	15	15	16
Orleans,	Barnstable,	15	-	-	-	-	9	-	-	-	-	7
Palmer,	Hampden,	15	-	-	-	14	15	-	-	-	10	12
Paxton,	Worcester,	15	13	13	13	15	16	9	10	10	12	12
Phillipston,	Worcester,	15	-	-	12	12	14	-	-	10	10	9
Pittsfield (W.),	Berkshire,	15	-	21	14	15	15	-	12	11	12	11 14
Pittsfield (E.),	Berkshire,	Gravel,	-	-	25	21	22	-	-	18	18	18
Plymouth,	Plymouth,	15	15	12	9	10-15	12-15	9	8	7	7-9	9-12
Princeton,	Worcester,	15	-	11	12	15	13	-	8	9	10	9
Quincy,	Norfolk,	33	-	-	-	-	34	-	-	-	-	20
Reading,	Middlesex,	15	-	-	-	14	14	-	-	-	11	10
Rehoboth,	Bristol,	15	9	15	12	12	12	9	9	7	9	9
Revere (Beachmont),	Suffolk,	24	-	-	23	24	25	-	-	15	12-22	10-20
Revere (Salem Turnpike),	Suffolk,	22	-	-	-	-	18	-	-	-	-	11
Richmond,	Berkshire,	Gravel,	-	16	9	10	11	-	8	7	7	8
Russell (Fairfield),	Hampden,	15	8-10	11	12	12	14	7	7	10	8-10	10
Russell (Huntington),	Hampden,	15	8-10	11	12	12	14	7	7	10	8-10	2-



Sandwich,	.	.	.	.	.	.	.	.	.	15	-	11	9	9-12	10	-	9	7	7
Saugus, .	.	.	.	.	.	.	.	.	.	22	-	-	-	-	18	-	-	11	11
Scituate, .	.	.	.	.	.	.	.	.	.	15	14	18	18	15-18	15-18	8	12	10	9-12
Shelburne, .	.	.	.	.	.	.	.	.	.	15-18	12-15	12-15	20	20	19	8	10	12	11
Shrewsbury, .	.	.	.	.	.	.	.	.	.	15-18	12-18	18	20	20	20	7-12	12	14	15
Somerset, .	.	.	.	.	.	.	.	.	.	15-18	15	18	18	18-21	15-21	9	12	9	10-15
South Hadley, .	.	.	.	.	.	.	.	.	.	15	15	14	14	14	14	10	10	10	8
Spencer, .	.	.	.	.	.	.	.	.	.	15	-	-	-	-	15	-	-	-	9
Sterling, .	.	.	.	.	.	.	.	.	.	15	-	11	12	12	13	-	7	7	8
Stoneham, .	.	.	.	.	.	.	.	.	.	15	-	-	16	18	18	-	-	10	10
Sturbridge, .	.	.	.	.	.	.	.	.	.	15	-	11	14	15	15	-	8	12	11
Sudbury, .	.	.	.	.	.	.	.	.	.	15	-	-	12	14	14	-	-	10	9
Sunderland, .	.	.	.	.	.	.	.	.	.	15	-	-	16	16	16	-	-	12	12
Sutton, .	.	.	.	.	.	.	.	.	.	15	-	-	-	13	15	-	-	9	9
Swampscott, .	.	.	.	.	.	.	.	.	.	Gravel,	-	-	-	25	25	-	-	15	15
Taunton, .	.	.	.	.	.	.	.	.	.	15	20	20	15	15-18	12-21	10-15	10	8	7-12
Templeton, .	.	.	.	.	.	.	.	.	.	15	-	-	-	14	14	-	-	-	8
Tewksbury, .	.	.	.	.	.	.	.	.	.	15	-	-	-	-	14	-	-	-	10
Tisbury, .	.	.	.	.	.	.	.	.	.	15	-	21	15	15-18	16	-	15	10	12
Townsend, .	.	.	.	.	.	.	.	.	.	15	-	12	13	14	15	-	8	8	9
Truro, .	.	.	.	.	.	.	.	.	.	10-15	-	6	6	9	9	-	6	6	5-7
Tyngsborough, .	.	.	.	.	.	.	.	.	.	15	10	12	12	13	15	10	8	9	9

<sup>1</sup> The increase in width of common travel due to the spreading of No. 2 stone in centre of road.

<sup>2</sup> Station 0 to 24, 7 feet; station 24 to 42, 11 feet; gravel section, maximum width, 11 feet, width commonly travelled, 8 feet.

TABLE SHOWING WIDTHS OF TRAVELLED WAY — *Concluded.*

TOWN OR CITY.	County.	Width of Macadam.	MAXIMUM WIDTH OF TRAVELLED WAY.				WIDTH OF COMMONLY TRAVELED WAY.					
			1896.	1897.	1898.	1899.	1900.	1896.	1897.	1898.	1899.	1900.
Uxbridge, . . . . .	Worcester, . . . . .	15	-	-	12	13	13	-	-	8	10.5	10
Walpole (Norwood), . . . . .	Norfolk, . . . . .	15	15	12	12	12	12-18	8	9	9	9	10
Walpole (Norfolk), . . . . .	Norfolk, . . . . .	15	-	10	10	10-12	12	-	7	7	7-9	9
Ware, . . . . .	Hampshire, . . . . .	15	-	-	15	15	15	-	-	8	8	9
Wareham (E.), . . . . .	Plymouth, . . . . .	15	-	15	12	12-15	15	-	10	7	9	12
Wareham (W.), . . . . .	Plymouth, . . . . .	15	-	-	12	12	12	-	-	7	8	9
Warren, . . . . .	Worcester, . . . . .	15	13	12	12	15	15	7	9	9	12	11
Watertown, . . . . .	Middlesex, . . . . .	27	33	33	33	33	30	25-30	25-30	25	25	20-25
Wayland, . . . . .	Middlesex, . . . . .	15	-	-	13	14	15	-	-	9	11	9
Wenham, . . . . .	Essex, . . . . .	15-18	-	14	14	14	14	-	9	11	11	10
Westborough, . . . . .	Worcester, . . . . .	15	-	12	12	13	13	-	10	9	10	10
West Boylston, . . . . .	Worcester, . . . . .	15	-	-	12	15	16	-	-	9	11	11
West Brookfield, . . . . .	Worcester, . . . . .	15	-	-	-	14	11	-	-	-	8.5	8
Westfield (E.), . . . . .	Hampden, . . . . .	15-18	13	13	16	15-18	18	9	9	12	12-14	14
Westfield (W.), . . . . .	Hampden, . . . . .	15-18	-	-	14	14	14	-	-	11	11	12
Westminster, . . . . .	Worcester, . . . . .	15	15	15	15	15	15	9	10	14	14	13
West Newbury, . . . . .	Essex, . . . . .	15	14	12	14	14	15	8	8	9	10	10
Weston, . . . . .	Middlesex, . . . . .	18	-	-	25	20	20-30	-	-	20	15	12-18
Westport, . . . . .	Bristol, . . . . .	18	14	21	21	15-18	15-18	14	12	12	9-12	12

West Springfield, . . . . .	Hampden, . . . . .	18	12-15	14	18	18	18	18	10	10	15	15	16
West Tisbury, . . . . .	Dukes, . . . . .	10-12-15	-	15-20	15	15-18	10-15	-	-	8-15	7	12	8-12
Westwood, . . . . .	Norfolk, . . . . .	15	-	-	-	-	12-18	-	-	-	-	-	9-12
Weymouth, . . . . .	Norfolk, . . . . .	15-18	21	18-21	17	18-21	18-21	21	12-15	12-15	10	12-15	12-15
Whately, . . . . .	Franklin, . . . . .	15	-	-	-	-	10	-	-	-	-	-	8
Whitman, . . . . .	Plymouth, . . . . .	18	15	22	21	21	21	11	13	12	15	15	15
Wilbraham, . . . . .	Hampden, . . . . .	15	8-9	11	11	12	15	7	8	8	9.5	12	12
Williamsburg, . . . . .	Hampshire, . . . . .	15	-	12	12	12	12	-	8	8	8	8	8
Williamstown, . . . . .	Berkshire, . . . . .	15	10-12	13	13	15-17	18	9	9	10	12-14	14	14
Winchester, . . . . .	Middlesex, . . . . .	15-18-20	-	-	-	18	18	-	-	-	-	13	8-12
Windsor, . . . . .	Berkshire, . . . . .	Gravel,	-	12	9	10	10	-	6	7	7	7	7
Woburn, . . . . .	Middlesex, . . . . .	15	-	-	-	-	14	-	-	-	-	-	9
Worcester (Paxton), . . . . .	Worcester, . . . . .	15	-	12	20	14	17	-	10	10	10	10	12
Worcester (Holden), . . . . .	Worcester, . . . . .	15	-	-	14	14	14	-	-	-	10	10	10
Wrentham (N.), . . . . .	Norfolk, . . . . .	15	-	11	10	9-12	12-15	-	8	7	7-9	9	9
Wrentham (S.), . . . . .	Norfolk, . . . . .	15	-	11	18	12-18	12-21	-	8	7	9-12	9-12	9-12
Yarmouth (N.), . . . . .	Barnstable, . . . . .	15	-	15-21	21	12-21	12-21	-	12-15	9	9-12	9-12	9-12
Yarmouth (S.), . . . . .	Barnstable, . . . . .	15	-	12-21	21	12-21	12-21	-	8-15	7	9-12	9-12	9-12

TABLE SHOWING THE HIGHWAYS LAID OUT, CONSTRUCTED OR CONTRACTED  
TIONS TO

[In the last column, the capital letters used have the following significance: A, trap; B, local E, limestone; F, gravel; G, gravel and thin macadam; H, screened gravel; K, clay and thin

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Abington, . . . . .	1900, . . . . .	Brockton line, . . . . .
2	Acton, . . . . .	1899, . . . . .	Concord line, . . . . .
3	Acton, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
4	Acushnet, . . . . .	1897, . . . . .	1,500 feet east from New Bedford line,
5	Adams, . . . . .	1897, . . . . .	Cheshire line, . . . . .
6	Amesbury, . . . . .	1899, . . . . .	Merrimac line, . . . . .
7	Andover, . . . . .	1895-96, . . . . .	Lawrence line, . . . . .
8	Andover, . . . . .	1897-99, . . . . .	North Reading line, . . . . .
9	Andover, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
10	Ashby, . . . . .	1894-98, . . . . .	Ashby post-office, . . . . .
11	Ashby, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
12	Ashfield, . . . . .	1897-98, . . . . .	One mile north of Ashfield post-office,
13	Athol, . . . . .	1895-96, . . . . .	Orange line, . . . . .
14	Attleborough, . . . . .	1900, . . . . .	North Attleborough line, . . . . .
15	Auburn, . . . . .	1895-97, . . . . .	Dunn's Mills, . . . . .
16	Auburn, . . . . .	1898, . . . . .	Worcester line, . . . . .
17	Auburn, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
18	Barnstable (North), . . . . .	1899, . . . . .	Sandwich line, . . . . .
19	Barnstable (South), . . . . .	1897, . . . . .	Yarmouth line, . . . . .
20	Barre, . . . . .	1897-99, . . . . .	Bridge over Ware River, . . . . .
21	Barre, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
22	Bedford, . . . . .	1897, . . . . .	Lexington line, . . . . .
23	Belchertown, . . . . .	1900, . . . . .	Near depot, . . . . .
24	Beverly, . . . . .	1895-97-98, . . . . .	Wenham line, . . . . .
25	Blackstone, . . . . .	1899, . . . . .	Uxbridge line, . . . . .
26	Blackstone, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
27	Bourne, . . . . .	1897-98, . . . . .	Cohasset Narrows, . . . . .
28	Boxborough, . . . . .	1897, . . . . .	Acton line, . . . . .
29	Boxborough, . . . . .	1899, . . . . .	End of 1897 lay-out, . . . . .
30	Braintree, . . . . .	1900, . . . . .	Quincy line, . . . . .
31	Brewster, . . . . .	1895-97, . . . . .	Dennis line, . . . . .
32	Brimfield, . . . . .	1897, . . . . .	Monson line, . . . . .
33	Brimfield, . . . . .	1899, . . . . .	About 200 feet south of 1897 lay-out, .
34	Brockton, . . . . .	1897-98-99, . . . . .	West Street, . . . . .

FOR BY THE COMMISSION, AND THE NATURE OF THE SEVERAL CONSTRUCTION.  
JAN. 1, 1901.

field stone; C, local ledge other than trap; D, bottom course local field stone, top course trap; macadam; M, clay and screened gravel.]

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Easterly, . . .	.68	.53	50	15	3	B.	1
Northerly, . . .	2.10	2.10	50+	15	3	A.	2
North-westerly, . .	.68	.68	50	15	3	A-G.	3
Northerly, . . .	.63	.63	50+	15	3	B.	4
Northerly, . . .	.57	.57	50	15	3	A.	5
Easterly, . . .	.51	.38	50-60	15	3	B.	6
Southerly, . . .	1.22	1.22	66	18	3	D.	7
Northerly, . . .	1.17	1.17	60	15	3	C.	8
Northerly, . . .	.68	.68	66	15	3	A.	9
Southerly, . . .	3.14	3.14	66-50	20-18-15	3	B.	10
South-westerly, . .	.44	.44	50	15	3-5	B.	11
Northerly, . . .	1.61	1.61	50-70	-	-	H.	12
Easterly, . . .	1.61	1.61	50	17	3	D-A.	13
South-westerly, . .	1.00	1.00	66	15	3	F.	14
Southerly, . . .	1.93	1.93	50	15	3	'95 A, '96-7 B.	15
Southerly, . . .	.45	.45	50	18	3	A.	16
South-westerly, . .	.69	.69	50+	15	-	A.	17
South-easterly, . .	.95	.95	50	15	-	B.	18
Westerly, . . .	.85	.85	40+	18-15	3	B.	19
North-westerly, . .	1.27	1.27	49.5	15	3	A.	20
North-westerly, . .	.36	.25	50	15	3	A.	21
North-westerly, . .	.55	.55	50	15	3	B.	22
South-westerly, . .	.66	-	50	15	3	A-G.	23
Southerly, . . .	2.06	2.06	50-60	18	3	'95-7 A, '98 C.	24
South-easterly, . .	.64	.64	50+	15	3	A-G.	25
South-easterly, . .	.52	Graded.	49.5	15	3	A-G.	26
Easterly, . . .	1.42	1.42	45+	15	3	B-C.	27
Westerly, . . .	.68	.76	50	15	3	B.	28
Westerly, . . .	.68	.60	60	15	4	B.	29
South-easterly, . .	.46	.12	66	18	3	A.	30
Easterly, . . .	2.48	2.48	40-50	15	3	B.	31
Southerly, . . .	1.17	1.17	50	-	-	H.	32
South-easterly, . .	1.17	1.17	60	Graded.	-	F.	33
Westerly, . . .	1.86	1.86	33	16	8-5	B.	34

TABLE SHOWING THE HIGHWAYS LAID OUT, CONSTRUCTED OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Brockton, . . . . .	1900, . . . . .	Abington line, . . . . .
2	Brookfield, . . . . .	1897-98, . . . . .	Mill Street, . . . . .
3	Brookfield, . . . . .	1900, . . . . .	End of 1898 lay-out, . . . . .
4	Buckland, . . . . .	1894-98-99, . . . . .	Shelburne Falls station, . . . . .
5	Buckland, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
6	Charlemont, . . . . .	1897-98, . . . . .	Bridge over Deerfield River, . . . . .
7	Charlemont, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
8	Chatham, . . . . .	1899, . . . . .	Depot Street, . . . . .
9	Chelmsford, . . . . .	1898, . . . . .	Lowell line, . . . . .
10	Chelmsford, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
11	Cheshire, . . . . .	1899, . . . . .	Farnham station, Boston & Albany Railroad.
12	Cheshire, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
13	Chester, . . . . .	1899, . . . . .	100 feet from Becket line, . . . . .
14	Chester, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
15	Chicopee, . . . . .	1897-98, . . . . .	Springfield line, . . . . .
16	Chicopee, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
17	Cohasset, . . . . .	1897-99, . . . . .	Near Hingham line, . . . . .
18	Cohasset, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
19	Colrain, . . . . .	1898, . . . . .	Shelburne line, . . . . .
20	Concord, . . . . .	1897-98, . . . . .	Lincoln line, . . . . .
21	Concord, . . . . .	1900, . . . . .	Acton line, . . . . .
22	Cottage City, . . . . .	1894-96, . . . . .	Sengekontacket bridge, . . . . .
23	Dalton, . . . . .	1895-96, . . . . .	Pittsfield line, . . . . .
24	Dartmouth, . . . . .	1898-99, . . . . .	Westport line, . . . . .
25	Dartmouth, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
26	Deerfield, . . . . .	1894-95, . . . . .	South Deerfield station, . . . . .
27	Deerfield, . . . . .	1900, . . . . .	Cheapside bridge, . . . . .
28	Dennis, . . . . .	1895-98, . . . . .	Yarmouth line, . . . . .
29	Dennis (South), . . . . .	1900, . . . . .	Bass River bridge, . . . . .
30	Duxbury, . . . . .	1894-95-97, . . . . .	Marshfield line, . . . . .
31	Duxbury, . . . . .	1899, . . . . .	End of 1897 lay-out, . . . . .
32	Easton, . . . . .	1900, . . . . .	Brockton line, . . . . .
33	Easthampton, . . . . .	1895-96, . . . . .	Northampton line, . . . . .
34	Easthampton, . . . . .	1900, . . . . .	Clark Street, . . . . .
35	Edgartown, . . . . .	1897-99, . . . . .	Sengekontacket bridge, . . . . .
36	Edgartown, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .



CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Westerly, . . .	.66	.66	50	15	3	B.	1
Easterly, . . .	.88	.88	50	15	3	A.	2
Easterly, . . .	.51	.51	50	15	3	A.	3
North-westerly, .	2.88	2.88	30-50	24-18-15-12	3	A-C.	4
South-westerly, .	.60	.60	50	12	3	A.	5
Easterly, . . .	.64	.64	42+	15	3	D.	6
South-easterly, .	.13	.13	50	15	-	D.	7
North-westerly, .	.59	.59	50	15-12	-	A.	8
Westerly, . . .	.82	.82	50	18	3	A.	9
Westerly, . . .	.11	.11	50	18	3	A.	10
North-easterly, .	.95	.94	50	15	-	G-A.	11
North-easterly, .	.47	.47	50	-	-	G-A.	12
North-easterly, .	.34	.34	50	15	3	A.	13
Easterly, . . .	.32	.32	50	15	3	A.	14
Northerly, . . .	.87	.87	50-60	20	4-3	A.	15
Northerly, . . .	.06	.06	55	-	-	A.	16
Easterly, . . .	.91	.47	50	15	3	D.	17
Easterly, . . .	.83	.66	50+	15	3	B.	18
Northerly, . . .	1.08	1.08	40-50	-	-	H.	19
North-westerly, .	1.47	1.47	50	15	3	B.	20
South-westerly, .	.52	-	50	15	3	G-A.	21
Northerly, . . .	2.37	2.37	50	15	3	B.	22
Easterly, . . .	1.56	1.56	30-60	15	7.5	A.	23
Easterly, . . .	1.30	.56	80	-	-	B.	24
Easterly, . . .	.91	.91	80	18	3	B.	25
South-easterly, .	1.53	1.53	30	15	3	A.	26
South-westerly, .	.41	-	50	15	3	A.	27
North-easterly, .	4.26	4.26	40-50-65	15	3	B.	28
Easterly, . . .	1.00	1.00	40	15	3	A.	29
Southerly, . . .	1.41	1.41	30-40	15	3	B-C.	30
Southerly, . . .	.69	.69	40-50	15	3	A.	31
South-westerly, .	.79	.79	70	15	3	G.	32
South-westerly, .	1.32	1.32	40	15	3	A.	33
Southerly, . . .	.79	.30	50	15	3	A.	34
Southerly, . . .	.61	.44	50	15	3	B.	35
South-easterly, .	.40	.39	50	15	3	B.	36

TABLE SHOWING THE HIGHWAYS LAID OUT, CONSTRUCTED OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Erving, . . . . .	1898-99, . . .	Town hall, . . . . .
2	Erving, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
3	Fairhaven, . . . . .	1894-95, . . .	Mattapoisett line, . . . . .
4	Fitchburg, . . . . .	1894-95, . . .	Westminster line, . . . . .
5	Fitchburg, . . . . .	1897, . . . . .	Lunenburg line, . . . . .
6	Fitchburg, . . . . .	1900, . . . . .	Ashby line, . . . . .
7	Gardner, . . . . .	1897-98, . . .	Templeton line, . . . . .
8	Gardner, . . . . .	1900, . . . . .	Westminster line, . . . . .
9	Gloucester, . . . . .	1894-95-98, . .	Manchester line, . . . . .
10	Goshen, . . . . .	1894-95, . . .	Goshen village, . . . . .
11	Grafton, . . . . .	1897-99, . . .	Millbury line, . . . . .
12	Grafton, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
13	Granby, . . . . .	1894, . . . . .	South Hadley line, . . . . .
14	Great Barrington, . . . . .	1894-96-97, . .	Housatonic River, . . . . .
15	Greenfield, . . . . .	1899, . . . . .	225 feet north-west of Boston & Maine bridge, near Deerfield line.
16	Greenfield, . . . . .	1900, . . . . .	500 feet from beginning of 1899 lay-out,
17	Groveland, . . . . .	1900, . . . . .	King Street, . . . . .
18	Hadley, . . . . .	1894-98-99, . .	Connecticut River bridge, . . . . .
19	Hadley, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
20	Hamilton, . . . . .	1899, . . . . .	2 miles north from Wenham line, . . . . .
21	Hamilton, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
22	Hancock, . . . . .	1895-96-98, . .	Pittsfield line, . . . . .
23	Hancock, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
24	Hardwick, . . . . .	1897, . . . . .	New Braintree line, . . . . .
25	Harvard, . . . . .	1900, . . . . .	Woodchuck hill, . . . . .
26	Harwich, . . . . .	1899, . . . . .	Bass River bridge, . . . . .
27	Harwich, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
28	Haverhill, . . . . .	1899, . . . . .	West end of River Street, . . . . .
29	Hingham, . . . . .	1894, . . . . .	Weymouth Back River, . . . . .
30	Hingham, . . . . .	1896-97, . . .	Near Cohasset line, . . . . .
31	Holbrook, . . . . .	1894-96, . . .	Weymouth line, . . . . .
32	Holden, . . . . .	1894-97, . . .	{ 1894-96, Holden village, 1897 end of 1894 lay-out,
33	Holden, . . . . .	1898, . . . . .	Worcester line, . . . . .
34	Holden, . . . . .	1900, . . . . .	End of 1898 lay-out, . . . . .
35	Huntington, . . . . .	1895-96, . . .	Russell line, . . . . .
36	Lawrence, . . . . .	1896, . . . . .	Methuen line, . . . . .

CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Easterly, . .	1.22	1.22	50+	-	-	F.	1
Easterly, . .	.82	.40	50	Gravel.	-	F.	2
Westerly, . .	1.45	1.45	30	15	3	B.	3
Easterly, . .	.97	.97	50	15	3	A.	4
Westerly, . .	.61	.61	50	18-15	3	D.	5
Southerly, . .	.57	.57	50	15	3	B.	6
Easterly, . .	2.37	2.37	50+	15	-	G.	7
Westerly, . .	.62	Partly graded.	60	Graded.	-	-	8
North-easterly, .	2.48		50	15	3	C-B.	9
South-easterly, .	1.91	1.91	50	15	3	B.	10
Easterly, . .	1.37	1.37	50	15	3	B.	11
South-easterly, .	.18	.18	50	15	3	G-A.	12
North-easterly, .	.63	.63	36	15	3	A.	13
Easterly, . .	2.79	2.79	40-50-70	18-15	3	A.	14
North-westerly, .	.59	.59	49.5-50	18	-	A.	15
Easterly, . .	.40	.17	50	15	3	A.	16
North-easterly, .	.56	-	50	15	3	B.	17
Easterly, . .	2.65	2.65	50-82.5-66+	15	3	A.	18
Easterly, . .	.20	-	50	15	3	A.	19
North-easterly, .	.66	.66	50	15	3	B.	20
Northerly, . .	.77	.77	50-60	15	3	B.	21
Westerly, . .	2.24	2.24	50	-	-	F.	22
Westerly, . .	.98	.98	50+	Gravel.	-	-	23
Northerly, . .	.39	.39	50	15	3	A.	24
Westerly, . .	.70	-	60	-	-	-	25
Easterly, . .	.89	.66	40+	15	-	A.	26
Easterly, . .	1.26	1.04	40	15	3	A.	27
Westerly, . .	2.08	Partly graded.	70	-	-	-	28
Easterly, . .	1.42		34	-	-	F.	29
Westerly, . .	1.23	1.23	50-33+	15	3	D.	30
Westerly, . .	1.11	1.11	50	15	3	B-C.	31
Northerly, } Southerly, }	2.70	2.70	30-49.5	18-15	3	B.	32
Northerly, . .	.46	.46	50	15	3-5	B.	33
Northerly, . .	.60	.60	50	15	3	B.	34
Westerly, . .	1.01	1.01	50+	15	3	A.	35
Southerly, . .	.27	.27	50	18	7	C.	36

TABLE SHOWING THE HIGHWAYS LAID OUT, CONSTRUCTED OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Lee, . . . . .	1894-96, . . .	Lee Park, . . . . .
2	Lee, . . . . .	1900, . . . . .	Lenox line, . . . . .
3	Leicester, . . . . .	1894-95-96-98, .	Worcester line, . . . . .
4	Leicester, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
5	Lenox, . . . . .	1899, . . . . .	Half-way between Lenoxdale and Lee line.
6	Lenox, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
7	Lexington, . . . . .	1895-98, . . . .	Massachusetts Avenue, . . . . .
8	Lexington, . . . . .	1900, . . . . .	Bedford line, . . . . .
9	Lincoln, . . . . .	1895-97, . . . .	Concord line, . . . . .
10	Lowell (Boulevard), . . .	1897, . . . . .	Tyngsborough line, . . . . .
11	Lowell (Princeton Street), .	1897-98, . . . .	Chelmsford line, . . . . .
12	Lunenburg, . . . . .	1898-99, . . . .	Fitchburg line, . . . . .
13	Lunenburg, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
14	Lynn, . . . . .	1899, . . . . .	264 feet north of centre of channel of Saugus River and Revere line.
15	Marion, . . . . .	1894-95, . . . .	Marion village, . . . . .
16	Marion, . . . . .	1897, . . . . .	Marion village, . . . . .
17	Marion, . . . . .	1899, . . . . .	End of 1897 lay-out, . . . . .
18	Marlborough (East), . . .	1897, . . . . .	Sudbury line, . . . . .
19	Marlborough (West), . . .	1897, . . . . .	Northborough line, . . . . .
20	Marlborough, . . . . .	1899, . . . . .	End of 1897 lay-out, . . . . .
21	Marlborough, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
22	Marshfield, . . . . .	1894-96-98, . . .	Duxbury line, . . . . .
23	Marshfield, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
24	Mattapoisett, . . . . .	1894-95, . . . .	Fairhaven line, . . . . .
25	Mattapoisett, . . . . .	1900, . . . . .	Ned Point Light road, . . . . .
26	Merrimac, . . . . .	1897-98, . . . .	Near Haverhill line, . . . . .
27	Merrimac, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
28	Methuen, . . . . .	1896, . . . . .	Lawrence line, . . . . .
29	Methuen, . . . . .	1900, . . . . .	End of 1896 lay-out, . . . . .
30	Middleborough, . . . . .	1894-98, . . . .	Nemasket River, . . . . .
31	Millbury, . . . . .	1900, . . . . .	Worcester line, . . . . .
32	Milton, . . . . .	1899, . . . . .	Neponset River, . . . . .
33	Milton, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
34	Monson, . . . . .	1894, . . . . .	Railroad bridge, . . . . .
35	Montague, . . . . .	1898-99, . . . .	Junction pipe line and ferry road, east,
36	Montague, . . . . .	1900, . . . . .	- - -

CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
Easterly, . .	Miles. 1.98	Miles. 1.98	Feet. 40-35-50	Feet. 24-15	Feet. 3	D.	1
Southerly, . .	1.26	.75	50	15	3	D.	2
Westerly, . .	4.19	4.19	39-53-55-67+	24-18-16-15	3-5-5.5	'94-6D, '98B	3
North-westerly, .	.68	.68	50-55	15	3	-	4
Southerly, . .	.89	.89	56±	15	3	D.	5
Southerly, . .	.32	.32	56±	15	3	D.	6
Westerly, . .	3.45	3.45	50-50+	15	3	B.	7
South-easterly, .	.77	.65	50	15	3	B.	8
South-easterly, .	2.06	2.06	50	15	3	B.	9
Easterly, . .	.97	.97	60	15	3	D.	10
Easterly, . .	1.34	1.34	50±	18	6	D.	11
Easterly, . .	1.04	1.04	50	15	3	D.	12
Easterly, . .	.40	.40	50	15	-	D.	13
North-easterly, .	.90	-	70	-	-	-	14
North-easterly, .	1.48	1.48	40	15	3	B.	15
Westerly, . .	.57	.57	55	15	3	B.	16
Southerly, . .	.81	.81	40	15	-	B.	17
Westerly, . .	.40	.40	50-60	15	3	B.	18
Easterly, . .	.73	.73	50	15	5-4-3	B.	19
Easterly, . .	.64	.64	50	15	3	B.	20
Easterly, . .	.34	.34	50	15	3	B.	21
Northerly, . .	1.45	1.45	30-40	15	3	B-C.	22
Northerly, . .	.55	.55	40-45	15	-	B-C.	23
Easterly, . .	1.16	1.16	30	15	3	B.	24
Easterly, . .	.81	.81	40	15	3	B.	25
North-easterly, .	.86	.86	50+	15	4-3	B.	26
Easterly, . .	.06	.06	50	15	3	C.	27
North-easterly, .	1.04	1.04	50	15	3	C.	28
North-easterly, .	.62	.62	50+	15	3	B.	29
Southerly, . .	2.76	2.76	30-50	15	7.5-3	B.	30
Southerly, . .	.37	Partly graded.	50	15	3	A.	31
South-easterly, .	.49	.49	49.5-82.5	24	4	A.	32
Southerly, . .	.37	.37	49.5-82.5	24	4	A.	33
Northerly, . .	.93	.93	36	15	3	A.	34
North-westerly, .	1.63	1.09	60	15	3	A.	35
North-westerly, .	-	.54	60	Graded.	-	-	36

TABLE SHOWING THE HIGHWAYS LAID OUT, CONSTRUCTED OR

	TOWN.	Year.	Road Laid Out.
			From —
1	Nantucket, . . . .	1894-96, . . .	First mile-stone, <sup>1</sup> . . . . .
2	Nantucket, . . . .	1896-97-99, . .	Easterly end of 1895 lay-out, . . . .
3	Nantucket, . . . .	1900, . . . .	End of 1899 lay-out, . . . . .
4	New Braintree, . . . .	1897, . . . .	Hardwick line, . . . . .
5	Newbury, . . . .	1899, . . . .	Newburyport line, . . . . .
6	Newbury, . . . .	1900, . . . .	End of 1899 lay-out, . . . . .
7	Newburyport, . . . .	1896-98, . . .	West Newbury line, . . . . .
8	Norfolk, . . . .	1895, . . . .	Walpole line, . . . . .
9	North Adams, . . . .	1894-96-97, . .	Williamstown line, . . . . .
10	North Adams, . . . .	1900, . . . .	Boston & Maine Railroad bridge, at Davenport Street.
11	Northampton, . . . .	1894, . . . .	Hadley bridge, . . . . .
12	Northampton, . . . .	1897, . . . .	Easthampton line, . . . . .
13	Northampton, . . . .	1898, . . . .	City street (bridge), . . . . .
14	Northampton, . . . .	1899, . . . .	End of 1898 lay-out, . . . . .
15	Northampton, . . . .	1900, . . . .	End of 1899 lay-out, . . . . .
16	Northampton, . . . .	1899, . . . .	End of 1897 lay-out, . . . . .
17	North Andover, . . . .	1900, . . . .	Lawrence line, . . . . .
18	North Attleborough, . . . .	1894-97, . . .	Bruce Avenue, . . . . .
19	North Attleborough, . . . .	1899, . . . .	End of 1897 lay-out, . . . . .
20	Northborough (East), . . . .	1897-98, . . .	Marlborough line, . . . . .
21	Northborough (South), . . . .	1897, . . . .	Westborough line, . . . . .
22	Northborough, . . . .	1900, . . . .	Shrewsbury line, . . . . .
23	North Reading, . . . .	1897-98, . . .	Andover line, . . . . .
24	Norwood, . . . .	1895-96, . . .	Ellis station, . . . . .
25	Norwood, . . . .	1897, . . . .	Walpole line, . . . . .
26	Norwood, . . . .	1899, . . . .	End of 1897 lay-out, . . . . .
27	Orange, . . . .	1894-95-97, . .	Athol line, . . . . .
28	Orange, . . . .	1900, . . . .	Erving line, . . . . .
29	Orleans, . . . .	1900, . . . .	Brewster line, . . . . .
30	Palmer, . . . .	1899, . . . .	Tenneyville, near Boston & Albany Railroad freight station.
31	Palmer, . . . .	1900, . . . .	End of 1899 lay-out, . . . . .
32	Paxton, . . . .	1895-98, . . .	Worcester line, . . . . .
33	Phillipston, . . . .	1897-98, . . .	Near Athol line, . . . . .
34	Pittsfield, . . . .	1894-98, . . .	Hancock line, . . . . .
35	Pittsfield, . . . .	1897, . . . .	Dalton line, . . . . .

<sup>1</sup> 1896, No. 2, from near seventh mile-stone, westerly.



CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
Easterly, . .	Miles. 3.23	Miles. 3.23	Feet. 66	Feet. 15	Feet. 3	B-E-G.	1
Easterly, . .	1.25	1.25	66	12	3	B-G.	2
South-easterly, .	.70	.60	66	12	3	B-G.	3
Southerly, . .	.17	.17	50	15	3	A.	4
Southerly, . .	.52	.52	66-95	15	3	B.	5
South-easterly, .	.70	-	78.5±	15	3	B.	6
Easterly, . .	1.75	1.75	60-60+-75+	15	3	C.	7
South-westerly, .	1.45	1.45	50	15	3	B.	8
Easterly, . .	1.69	1.69	30-66	15	3	D.	9
South-easterly, .	.54	Partly graded.	50	15	3	A.	10
South-westerly, .	.56	.56	40	20	3	C.	11
Northerly, . .	.33	.33	50	15	3	A.	12
Southerly, . .	.27	.27	50	15	3	A.	13
Southerly, . .	.20	.20	50	15	-	A.	14
North-easterly, .	.15	.15	50	15	3	A.	15
Northerly, . .	.16	.16	50	15	3	A.	16
South-easterly, .	.79	.79	66	15	3	D.	17
South-westerly, .	3.21	3.21	36-66	24-18-15	3	'94-5B, '96-7F.	18
South-westerly, .	.38	.38	66	-	-	F.	19
South-westerly, .	1.36	1.36	66	15	4-3	B.	20
North-westerly, .	.42	.42	50	15	3	B.	21
Easterly, . .	.41	Partly graded.	66	15	3	B.	22
Southerly, . .	1.01	1.01	66	15	3	C.	23
Southerly, . .	1.02	1.02	40-50-67	15	3	B.	24
Northerly, . .	.54	.57	50	15	3	B.	25
North-easterly, .	.50	.47	45-50-60	15	3	B.	26
Westerly, . .	2.18	2.18	30-49.5	17	3-5	D-A.	27
Easterly, . .	.41	-	50	15	3	B.	28
North-easterly, .	.82	.82	50	15	3	B.	29
South-easterly, .	.68	.74	50	15	3	G-A.	30
Easterly, . .	.89	.90	50+	15	3	G-A.	31
North-westerly, .	3.24	3.24	50-70	15	3-5	B.	32
Easterly, . .	1.19	1.19	50	15-12	4-3	B.	33
Easterly, . .	1.54	1.54	60-50-40	15	3	A.	34
Westerly, . .	.76	.76	50	-	-	F.	35

TABLE SHOWING THE HIGHWAYS LAID OUT, CONSTRUCTED OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Plymouth, . . . . .	1894-98, . . .	Beaver Dam brook, . . . . .
2	Princeton, . . . . .	1897, . . . . .	Princeton station, . . . . .
3	Princeton, . . . . .	1900, . . . . .	End of 1897 lay-out, . . . . .
4	Quincy, . . . . .	1899, . . . . .	Near Weymouth Fore River bridge, .
5	Reading, . . . . .	1899, . . . . .	Stoneham line, . . . . .
6	Reading, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
7	Rehoboth, . . . . .	1895-96, . . . .	Seekonk line, . . . . .
8	Rehoboth, . . . . .	1899, . . . . .	End of 1896 lay-out, . . . . .
9	Revere, . . . . .	1897-98, . . . .	Boston line, . . . . .
10	Revere, . . . . .	1899, . . . . .	3,500 feet south-west from Saugus line,
11	Richmond, . . . . .	1897-98, . . . .	Boston & Albany Railroad station, .
12	Richmond, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
13	Russell (Fairfield), . . . .	1894-96-97-98, .	Westfield line, . . . . .
14	Russell (Huntington), . . . .	1894-95-98, . . .	Huntington line, . . . . .
15	Russell, . . . . .	1899, . . . . .	End of 1898 lay-out, Fairfield, . . .
16	Sandwich, . . . . .	1897-98, . . . .	Barnstable line, . . . . .
17	Sandwich, . . . . .	1900, . . . . .	End of 1898 lay-out, . . . . .
18	Saugus, . . . . .	1899, . . . . .	Fox Hill bridge, . . . . .
19	Scituate, . . . . .	1894-95, . . . .	North Scituate station, . . . . .
20	Scituate, . . . . .	1900, . . . . .	End of 1894 lay-out, . . . . .
21	Shelburne, . . . . .	1894-97, . . . .	Bridge Street, . . . . .
22	Seekonk, . . . . .	1900, . . . . .	Rehoboth line, . . . . .
23	Shrewsbury, . . . . .	1895-98-99, . . .	Worcester line, . . . . .
24	Shrewsbury, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
25	Somerset, . . . . .	1895-97-99, . . .	South Street, . . . . .
26	Somerset, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
27	South Hadley, . . . . .	1895-97-98-99, .	Granby line, . . . . .
28	South Hadley, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
29	Spencer, . . . . .	1897, . . . . .	Leicester line, . . . . .
30	Spencer, . . . . .	1900, . . . . .	End of 1897 lay-out, . . . . .
31	Sterling, . . . . .	1897-98, . . . .	Near town hall, . . . . .
32	Stoneham, . . . . .	1897-98, . . . .	South Street, . . . . .
33	Stoneham, . . . . .	1900, . . . . .	Reading line, . . . . .
34	Sturbridge, . . . . .	1897, . . . . .	Fisk Hill Road, . . . . .
35	Sudbury, . . . . .	1897-98, . . . .	Marlborough line, . . . . .
36	Sudbury, . . . . .	1900, . . . . .	End of 1898 lay-out, . . . . .

CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Southerly and northerly.	3.86	3.86	40-50-112	15	3	B.	1
Easterly, . . .	.49	.49	50	15	3	B.	2
Easterly, . . .	.50	-	50	15	3	B.	3
North-westerly, .	.49	.50	63-66	32	-	-	4
Northerly, . . .	.85	.85	66	15	3	B.	5
Northerly, . . .	.21	-	66	18	3	B.	6
Easterly, . . .	1.55	1.55	60	15	3	B.	7
Easterly, . . .	.34	.34	60	15	-	B.	8
North-easterly, .	.58	.58	44-50	24	3	A.	9
North-easterly, .	.67	.67	71	22	2	A.	10
Northerly, . . .	1.03	1.03	66	-	-	F.	11
North-easterly, .	.33	.33	66	Gravel.	-	-	12
Westerly, . . .	4.03	4.03	50	15	3	'94 A, '96-'97- '98 F.	13
South-easterly, .	1.25	1.25	50	15	3	'94-'95 A, '98 F.	14
North-westerly, .	1.33	1.33	50	Gravel.	-	-	15
North-westerly, .	1.83	1.83	50	15	3	B.	16
Westerly, . . .	.74	Partly graded.	50	15	3	B.	17
Southerly, . . .	1.60	1.60	71±	22	2	A.	18
South-easterly, .	1.17	1.17	30	15	3	B-C.	19
South-easterly, .	.60	.60	40-50	15	3	A.	20
North-easterly, .	2.16	2.16	30-50	18-15	3	B-A.	21
Westerly, . . .	.56	-	60	15	3	B.	22
North-easterly, .	3.45	3.45	50-65	18-15	5-4-3	B.	23
Easterly, . . .	.43	Partly graded.	66	15	3	B.	24
Southerly, . . .	2.75	2.75	40-60	18-15	3	B.	25
South-westerly, .	.84	.84	50-60	18	3	B.	26
South-westerly, .	2.16	2.16	36-50	15	3	A.	27
Westerly, . . .	.25	.25	50	15	3	A.	28
Westerly, . . .	.43	-	50	15	4-3	B.	29
Westerly, . . .	.85	1.28	50+	15	3	D.	30
South-westerly, .	1.29	1.29	50	15	3	A.	31
Northerly, . . .	.57	.57	60-66	15	7.5	B.	32
Southerly, . . .	.62	-	66	15	-	B.	33
Northerly, . . .	.58	.58	50	15	4.3	B.	34
Easterly, . . .	.96	.96	50-60	15	3	B.	35
Easterly, . . .	.53	.53	50±	15	3	B.	36

TABLE SHOWING THE HIGHWAYS LAID OUT, CONSTRUCTED OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Sunderland, . . . .	1897, . . . .	Connecticut River bridge, . . . .
2	Sutton, . . . . .	1899, . . . .	Millbury line, . . . . .
3	Swampscott, . . . .	1897, . . . .	Boston & Maine Railroad (Marblehead branch).
4	Swampscott, . . . .	1900, . . . .	End of 1897 lay-out, . . . . .
5	Taunton, . . . . .	1895-96-98-99, .	Near Highland Street, . . . . .
6	Taunton, . . . . .	1900, . . . .	End of 1899 lay-out, . . . . .
7	Templeton, . . . .	1899, . . . .	Gardner line, . . . . .
8	Tewksbury, . . . .	1900, . . . .	Lowell line, . . . . .
9	Tisbury, . . . . .	1894, . . . .	Vineyard Haven village, . . . .
10	Townsend, . . . . .	1896-98-99, .	Near Townsend harbor, . . . .
11	Townsend, . . . . .	1900, . . . .	End of 1896 lay-out, . . . . .
12	Truro, . . . . .	1895, . . . .	Wellfleet line, . . . . .
13	Tyngsborough, . . . .	1895-96, . . .	Tyngsborough bridge, . . . . .
14	Uxbridge, . . . . .	1897-98, . . .	Blackstone line, . . . . .
15	Walpole (South), . . . .	1894-95-97, .	Norfolk line, . . . . .
16	Walpole (South), . . . .	1900, . . . .	End of 1894 lay-out, . . . . .
17	Walpole (North), . . . .	1897-98, . . .	Norwood line, . . . . .
18	Walpole (North), . . . .	1900, . . . .	150 feet from end of 1898 lay-out, . . . .
19	Ware, . . . . .	1897-99, . . .	New Braintree line, . . . . .
20	Ware, . . . . .	1900, . . . .	End of 1897 lay-out to beginning of 1899 lay-out.
21	Wareham, . . . . .	1896, . . . .	Near Weweeantit bridge, . . . .
22	Wareham, . . . . .	1898, . . . .	Cohasset Narrows bridge, . . . .
23	Warren, . . . . .	1896-98-99, .	West Warren, . . . . .
24	Warren, . . . . .	1900, . . . .	End of 1899 lay-out, . . . . .
25	Watertown, . . . . .	1895-96, . . .	Waltham line, . . . . .
26	Wayland, . . . . .	1897, . . . .	Weston line, . . . . .
27	Wayland, . . . . .	1900, . . . .	End of 1897 lay-out, . . . . .
28	Wenham, . . . . .	1897, . . . .	Beverly line, . . . . .
29	Westborough, . . . .	1897, . . . .	Near insane hospital, . . . . .
30	West Boylston, . . . .	1897-98, . . .	Worcester line, . . . . .
31	West Brookfield (East), . . . .	1899, . . . .	Brookfield line, . . . . .
32	West Brookfield (West), . . . .	1899, . . . .	Ware line, . . . . .
33	West Brookfield, . . . .	1900, . . . .	End of 1899 lay-out, . . . . .
34	West Bridgewater, . . . .	1900, . . . .	Brockton line, . . . . .
35	Westfield, . . . . .	1894-96-98, .	West Springfield line, . . . . .
36	Westfield, . . . . .	1898, . . . .	End of town macadam, . . . . .

CONTRACTED FOR BY THE COMMISSION, ETC. — *Continued.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
Easterly, . . .	.19	.19	50	15	3	A.	1
Southerly, . . .	.49	.49	50	15	-	B.	2
North-easterly, .	1.03	1.03	60	-	-	F.	3
Westerly, . . .	.39	-	50-64	18-20	-	A.	4
Westerly, . . .	2.14	2.14	40-66	15	3	B.	5
Westerly, . . .	.60	.60	66	15	-	B.	6
North-westerly, .	.62	.62	50+	15	-	G-A.	7
South-easterly, .	.56	.57	50	15	3	A.	8
South-westerly, .	1.93	1.93	50	15	3	B.	9
North-westerly, .	1.85	1.85	55-60	15	3	B.	10
South-easterly, .	.74	.51	50-60	15	-	A.	11
Northerly, . . .	2.36	1.28	40	<sup>1</sup> 10-15	-	K-M.	12
South-easterly, .	2.95	2.95	60	15	3	A-D.	13
North-westerly, .	1.27	1.27	50	15	3-5	B.	14
Northerly, . . .	1.97	1.97	50	15	3	C-B.	15
North-easterly, .	.53	.53	50+	15	3	C-B.	16
Southerly, . . .	1.70	1.70	50	15	3	B.	17
Westerly, . . .	.24	.34	50	15	3	B.	18
Southerly, . . .	.34	.34	50	15	3	A.	19
South-westerly, .	1.46	1.46	50	15	3	A.	20
Easterly, . . .	.57	.57	50	15	3	B.	21
Westerly, . . .	1.05	1.05	40+	15	3	B.	22
Easterly, . . .	2.46	1.89	49.5-50	15	3-4	A.	23
Easterly, . . .	.36	.94	49.5	15	3	G-A.	24
Easterly, . . .	.85	.85	36	27	3-4	A-B.	25
North-westerly, .	.61	.59	50	15	3	B.	26
Westerly, . . .	1.66	1.17	50-66	15	3	B.	27
Northerly, . . .	.60	.60	50	15-18	4-12	A.	28
North-westerly, .	.71	.71	50	15	3	B.	29
Northerly, . . .	1.55	1.55	50	15	3	'97 H, '98 A-H.	30
North-westerly, .	.43	.43	50	15	-	A.	31
South-westerly, .	.15	.15	50	15	3	A.	32
North-westerly, .	.38	.38	50	15	3	A.	33
Southerly, . . .	1.00	-	60	15	3	-	34
Westerly, . . .	1.84	1.84	50	18-15	3	A.	35
Westerly, . . .	.51	.51	50+	18	3	A.	36

<sup>1</sup> Beach stone, 15 feet; broken stone and clay, 10 feet.

TABLE SHOWING THE HIGHWAYS LAID OUT, CONSTRUCTED OR

	TOWN.	Year.	ROAD LAID OUT.
			From —
1	Westfield, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
2	Westfield, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
3	Westminster, . . . . .	1894-98, . . . . .	Fitchburg line, . . . . .
4	Westminster, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
5	West Newbury, . . . . .	1895-97, . . . . .	Newburyport line, . . . . .
6	Weston, . . . . .	1898, . . . . .	Near Waltham line, . . . . .
7	Weston, . . . . .	1899, . . . . .	End of 1898 lay-out, . . . . .
8	Westport, . . . . .	1894-95-97-98, . . . . .	East of railroad crossing, . . . . .
9	West Springfield, . . . . .	1895-96, . . . . .	Top of Tatham hill, . . . . .
10	West Tisbury, . . . . .	1895-97, . . . . .	Tisbury line, . . . . .
11	Westwood, . . . . .	1899, . . . . .	Near Ellis station, . . . . .
12	Westwood, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
13	Weymouth, . . . . .	1894, . . . . .	Holbrook line, . . . . .
14	Weymouth, . . . . .	1895-97, . . . . .	Fore River to Back River, . . . . .
15	Whately, . . . . .	1899, . . . . .	Deerfield line, . . . . .
16	Whitman, . . . . .	1894-96, . . . . .	Brockton line, . . . . .
17	Wilbraham, . . . . .	1895-97, . . . . .	New Springfield line, . . . . .
18	Williamsburg, . . . . .	1896-98, . . . . .	Goshen line, . . . . .
19	Williamstown, . . . . .	1895-96-98, . . . . .	North Adams line, . . . . .
20	Winchester, . . . . .	1899, . . . . .	Arlington line, . . . . .
21	Winchester, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
22	Windsor, . . . . .	1897, . . . . .	Cummington line, . . . . .
23	Woburn, . . . . .	1900, . . . . .	Winchester line, . . . . .
24	Worcester, . . . . .	1896-97, . . . . .	Paxton line, . . . . .
25	Worcester, . . . . .	1897, . . . . .	Holden line, . . . . .
26	Worcester, . . . . .	1900, . . . . .	West Boylston line, . . . . .
27	Wrentham, . . . . .	1894-95, . . . . .	Near Berry Street, . . . . .
28	Wrentham, . . . . .	1897-98-99, . . . . .	Norfolk line, . . . . .
29	Wrentham, . . . . .	1900, . . . . .	End of 1899 lay-out, . . . . .
30	Yarmouth (North), . . . . .	1894-96, . . . . .	Bass River to Barnstable line, . . . . .
31	Yarmouth (South), . . . . .	1895-97, . . . . .	Barnstable line to Dennis line, . . . . .



CONTRACTED FOR BY THE COMMISSION, ETC.—*Concluded.*

ROAD LAID OUT.		Length Con- structed.	WIDTHS.			Material of Road Surface.	
Direction.	Length.		Location.	Macadam.	Shoulders.		
	Miles.	Miles.	Feet.	Feet.	Feet.		
North-westerly, .	1.12	1.12	50+	18-15	-	A.	1
South-westerly, .	.60	.56	50	15	-	A.	2
South-westerly, .	2.70	2.70	50-60	15	3	D.	3
Westerly, . .	.30	.30	50	15	3	C.	4
Westerly, . .	2.22	2.22	50-110	15	3-4.5	D.	5
Westerly, . .	1.26	1.26	50	-	-	C.	6
Westerly, . .	1.89	1.89	50+	18	-	B.	7
Easterly, . .	4.25	4.25	66-80	18	3	C-B.	8
Easterly, . .	1.53	1.53	50-136	18	3	A.	9
South-westerly, .	2.84	2.84	50	15-12-10	3	B.	10
Northerly, . .	.81	.81	45-60	15	3	B.	11
North-easterly, .	.23	.23	55-60	15	3	B.	12
Easterly, . .	.25	.25	50	15	3	B.	13
Westerly, . .	1.75	1.75	125-50	15-18	3	A-B-C.	14
South-westerly, .	.78	.79	50	12	3	A.	15
Easterly, . .	1.70	1.70	45	18	4	B.	16
Easterly, . .	1.91	1.91	50-79	15	3	A.	17
South-easterly, .	1.72	1.55	50	15	3	B.	18
Westerly, . .	1.92	1.92	50-60-70	'98 graded. 15	3	D.	19
North-easterly, .	.75	.75	50	20	-	C.	20
North-westerly, .	1.19	1.20	50	15-21	-	C.	21
Westerly, . .	.28	.28	50	-	-	F.	22
North-westerly, .	.92	.92	50	15	3	G-C.	23
South-easterly, .	1.35	1.35	50	15	3	B.	24
Southerly, . .	.66	.66	50	15	3	B.	25
South-westerly, .	.54	Partly graded.	50	15	3	A.	26
South-easterly, .	1.62	1.62	26-34	15	3	B.	27
South-easterly, .	1.98	1.98	50	15	3	B.	28
Northerly, . .	1.11	1.11	50	15	-	B.	29
Westerly, . .	3.71	3.71	40-60	15	3	B.	30
Easterly, . .	5.10	5.10	40	15	3	B-C.	31

## APPENDIX B.

TABLE SHOWING TOWNS AND CITIES IN WHICH WORK HAS BEEN DONE DURING THE YEAR 1900,  
THE RESIDENT ENGINEERS ON SUCH WORK, TOGETHER WITH DATES OF BEGINNING AND  
ENDING.

TOWN OR CITY.	County.	Lay-out.	Resident Engineer.	Date of Contract.	Date of Beginning.	Date of Ending.
Abington, . . . . .	Plymouth, . . . . .	1900	Everett, P. H.,	Sept. 27, 1900,	Oct. 8,	1900. Dec. 15.
Acton, . . . . .	Middlesex, . . . . .	1899	Holden, H. C.,	Oct. 5, 1899,	April 9,	June 28.
Acton, . . . . .	Middlesex, . . . . .	1900	Raymond, C. A.,	Sept. 6, 1900,	Oct. 4,	Dec. 4.
Amesbury, . . . . .	Essex, . . . . .	1899	Winslow, D. H.,	Nov. 23, 1899,	Jan. 15,	Jan. 27.
Amesbury, . . . . .	Essex, . . . . .	1899	Winslow, D. H.,	Nov. 23, 1899,	Mar. 26,	June 2.
Andover, . . . . .	Essex, . . . . .	1900	Holden, H. C.,	Aug. 16, 1900,	Aug. 29,	Oct. 16.
Ashby, . . . . .	Middlesex, . . . . .	1899	Brown, C. L.,	July 28, 1899,	April 26,	May 11.
Ashfield, . . . . .	Franklin, . . . . .	1897-8	Brown, C. L.,	Aug. 24, 1899,	May 14,	June 11.
Attleborough, . . . . .	Bristol, . . . . .	1900	Lucy, E. A.,	Sept. 6, 1900,	Oct. 1,	Nov. 13.
Attleborough, . . . . .	Bristol, . . . . .	1900	Shaw, S.,	Sept. 6, 1900,	Sept. 20,	Dec. 11.
Barre, . . . . .	Worcester, . . . . .	1900	Packard, S. G.,	Oct. 25, 1900,	Nov. 14,	Dec. 31.
Blackstone, . . . . .	Worcester, . . . . .	1900	Power, E. P.,	Oct. 11, 1900,	Oct. 23,	Dec. 22.
Boxborough, . . . . .	Middlesex, . . . . .	1899	Holden, H. C.,	Sept. 14, 1899,	April 19,	April 24.
Braintree, . . . . .	Norfolk, . . . . .	1900	Norton, C. H.,	Nov. 8, 1900,	Nov. 12,	Dec. 31.
Brockton, . . . . .	Plymouth, . . . . .	1900	Grimes, M. W.,	June 4, 1900,	June 11,	Sept. 5.
Brockton, . . . . .	Plymouth, . . . . .	1900	Everett, P. H.,	June 4, 1900,	Nov. 1,	Dec. 31.
Brockfield, . . . . .	Worcester, . . . . .	1900	Warren, H. E.,	Aug. 23, 1900,	Sept. 7,	Nov. 7.
Buckland, . . . . .	Franklin, . . . . .	1900	Grimes, M. W.,	Aug. 16, 1900,	Sept. 6,	Dec. 19.
Cheshire, . . . . .	Berkshire, . . . . .	1899	Farnham, A. B.,	Oct. 5, 1899,	April 14,	July 7.

Cheshire, .	.	.	.	.	1900	Farnham, A. B.,	June 28, 1900,	July 9,	Oct. 16.
Chester, .	.	.	.	.	1900	Southworth, A. L.,	Aug 23, 1900,	Sept. 11,	Oct. 12.
Cohasset, .	.	.	.	.	1900	Litchfield, S.,	Sept. 6, 1900,	Sept. 19,	Dec. 13.
Dartmouth, .	.	.	.	.	1900	Winslow, D. H.,	Aug. 16, 1900,	Sept. 11,	Dec. 1.
Dennis (1), .	.	.	.	.	1900	Southworth, A. L.,	May 17, 1900,	May 30,	July 31.
Dennis (2), .	.	.	.	.	1900	Gray, A. W.,	Oct. 4, 1900,	Oct. 15,	Dec. 18.
Easthampton, .	.	.	.	.	1900	Gerry, L. L.,	Nov. 8, 1900,	Nov. 15,	Dec. 10.
Easton, .	.	.	.	.	1900	Everett, P. H.,	Sept. 27, 1900,	Oct. 16,	Dec. 15.
Edgartown, .	.	.	.	.	1899	Southworth, A. L.,	Oct. 19, 1899,	May 1,	Dec. 12.
Edgartown, .	.	.	.	.	1900	Farnham, A. B.,	Oct. 18, 1900,	Oct. 26,	Dec. 14.
Erving, .	.	.	.	.	1900	Brown, C. L.,	June 7, 1900,	June 19,	Sept. 8.
Fitchburg, .	.	.	.	.	1900	Gerry, L. L.,	Aug. 23, 1900,	Sept. 4,	Oct. 18.
Fitchburg, .	.	.	.	.	1900	Packard, S. G.,	Aug. 23, 1900,	Oct. 18,	Nov. 12.
Gardner, .	.	.	.	.	1900	Brown, C. L.,	Sept. 6, 1900,	Oct. 17,	Nov. 27.
Gardner, .	.	.	.	.	1900	Phillips, H. D.,	Sept. 6, 1900,	Nov. 27,	Dec. 19.
Gardner, .	.	.	.	.	1897	Brown, C. L.,	July 6, 1899,	Sept. 21,	Oct. 30.
Grafton, .	.	.	.	.	1900	Everett, P. H.,	May 3, 1900,	May 8,	June 16.
Greenfield, .	.	.	.	.	1900	Gerry, L. L.,	Sept. 27, 1900,	Oct. 22,	Dec. 19.
Hadley, .	.	.	.	.	1899	Gerry, L. L.,	Oct. 12, 1899,	May 21,	Aug. 23.
Hamilton, .	.	.	.	.	1899	Grimes, M. W.,	Sept. 21, 1899,	April 9,	April 26.
Hamilton, .	.	.	.	.	1900	Raymond, C. A.,	May 31, 1900,	Aug. 1,	Oct. 2.
Hancock, .	.	.	.	.	1899	Crosby, W. W.,	Sept. 26, 1899,	May 29,	July 29.
Harwich (1), .	.	.	.	.	1900	Southworth, A. L.,	May 17, 1900,	May 28,	Aug. 14.
Harwich (2), .	.	.	.	.	1900	Gray, A. W.,	Oct. 18, 1900,	Nov. 12,	Dec. 31.
Holden, .	.	.	.	.	1900	Power, E. P.,	Aug. 16, 1900,	Aug. 17,	Oct. 23.
Lee, .	.	.	.	.	1900	Dadley, A. D.,	Aug. 16, 1900,	Sept. 4,	Dec. 8.
Leicester, .	.	.	.	.	1899	Power, E. P.,	July 20, 1899,	April 1,	July 25.
Lenox, .	.	.	.	.	1899	Dadley, A. D.,	Aug. 3, 1899,	May 2,	Oct. 5.
Lenox, .	.	.	.	.	1900	Dadley, A. D.,	July 26, 1900,	Sept. 4,	Dec. 1.
Lexington, .	.	.	.	.	1900	Adams, C. E.,	Sept. 27, 1900,	Oct. 15,	Dec. 15.
Lunenburg, .	.	.	.	.	1900	Gerry, L. L.,	Aug. 23, 1900,	Sept. 5,	Oct. 18.
Marlborough, .	.	.	.	.	1899	Welton, C. A.,	Aug. 24, 1899,	May 25,	Oct. 2.

TABLE SHOWING TOWNS AND CITIES IN WHICH WORK HAS BEEN DONE, ETC. — *Continued.*

TOWN OR CITY.	County.	Lay-out.	Resident Engineer.	Date of Contract.	Date of Beginning.	Date of Ending.
Marlborough,	Middlesex,	1900	Welton, C. A.,	Sept. 6, 1900,	1900. Sept. 24,	1900. Dec. 6.
Mattapoisett,	Plymouth,	1900	Brown, G. R.,	Aug. 16, 1900,	Sept. 20,	Dec. 7.
Methuen,	Essex,	1900	Crosby, W. W.,	Sept. 27, 1900,	Oct. 12,	Dec. 12.
Methuen,	Essex,	1900	Holden, H. C.,	Sept. 27, 1900,	Nov. 15,	Nov. 30.
Millbury,	Worcester,	1900	Power, E. P.,	Nov. 8, 1900,	Nov. 17,	Dec. 10.
Milton,	Norfolk,	1899	Parsons, S. A.,	Oct. 5, 1899,	April 2,	April 16.
Milton,	Norfolk,	1899	Norton, C. H.,	Oct. 5, 1899,	April 16,	June 26.
Milton,	Norfolk,	1900	Norton, C. H.,	Oct. 4, 1900,	Oct. 29,	Dec. 31.
Montague,	Franklin,	1899	Gerry, L. L.,	Dec. 14, 1899,	Jan. 1,	July 6.
Nantucket,	Nantucket,	1900	Farnham, A. B.,	Oct. 4, 1900,	Oct. 22,	Dec. 31.
Newbury,	Essex,	1899	Dadley, A. D.,	Oct. 12, 1899,	Mar. 26,	April 26.
Newbury,	Essex,	1899	Winslow, G. R.,	Oct. 12, 1899,	April 28,	June 1.
North Adams,	Berkshire,	1900	Southworth, A. L.,	Sept. 27, 1900,	Nov. 9,	Nov. 30.
Northampton,	Hampshire,	1899	Gerry, L. L.,	Aug. 17, 1899,	June 6,	Sept. 1.
North Andover,	Essex,	1900	Holden, H. C.,	Sept. 13, 1900,	Sept. 17,	Oct. 26.
North Andover,	Essex,	1900	Crosby, W. W.,	Sept. 13, 1900,	Nov. 15,	Nov. 30.
Northborough,	Worcester,	1900	Welton, C. A.,	Oct. 25, 1900,	Oct. 25,	Dec. 12.
Orleans,	Barnstable,	1900	Gray, A. W.,	Aug. 30, 1900,	Oct. 30,	Dec. 14.
Palmer,	Hampden,	1900	Cutter, F. P.,	June 28, 1900,	Oct. 15,	Dec. 1.
Plymouth,	Plymouth,	1898	Grimes, M. W.,	July 6, 1899,	July 11,	Sept. 5.
Quincy,	Norfolk,	1899	Phillips, H. D.,	April 5, 1900,	April 23,	May 30.
Reading,	Middlesex,	1899	Wilbur, N. B.,	Sept. 21, 1899,	May 7,	July 21.
Reading,	Middlesex,	1900	Holden, H. C.,	Oct. 25, 1900,	Nov. 12,	Dec. 18.
Rehoboth,	Bristol,	1899	Norton, C. H.,	Aug. 24, 1899,	Aug. 1,	Oct. 17.
Rehoboth,	Bristol,	1899	Brine, L. R.,	Aug. 24, 1899,	Oct. 17,	Dec. 11.
Revere-Saugus,	Suffolk,	1899	Ruggles, E. F.,	Oct. 19, 1899,	Jan. 1,	Jan. 16.

Revere-Saugus, .	.	.	.	1899	Holden, H. C.,	.	Oct. 19, 1899,	Jan. 16,	Mar. 12.
Revere-Saugus, .	.	.	.	1899	Palmer, J. E., .	.	Oct. 19, 1899,	Mar. 12,	April 28.
Revere-Saugus, .	.	.	.	1899	Nichols, E. J.,	.	Oct. 19, 1899,	April 28,	July 28.
Revere-Saugus, .	.	.	.	Bridges.	Nichols, E. J.,	.	April 26, 1900,	June 25,	July 28.
Revere-Saugus, .	.	.	.	Bridges.	Crosby, W. W.,	.	June 14, 1900,	July 30,	Oct. 20.
Revere-Saugus, .	.	.	.	Bridges.	Crosby, W. W.,	.	April 26, 1900,	June 25,	July 28.
Revere-Saugus, .	.	.	.	Bridges.	Crosby, W. W.,	.	June 14, 1900,	July 30,	Oct. 20.
Sandwich, .	.	.	.	1900	Bradford, J. L.,	.	Aug. 30, 1900,	Nov. 10,	Dec. 28.
Scituate, .	.	.	.	1900	Litchfield, S. Jr.,	.	Aug. 30, 1900,	Nov. 14,	Nov. 20.
Seekonk, .	.	.	.	1900	Norton, C. H.,	.	Sept. 21, 1900,	Oct. 8,	Oct. 17.
Seekonk, .	.	.	.	1900	Brine, L. R., .	.	Sept. 21, 1900,	Oct. 17,	Dec. 11.
Shrewsbury, .	.	.	.	1899	Welton, C. A.,	.	Aug. 24, 1899,	April 16,	May 10.
Shrewsbury, .	.	.	.	1900	Welton, C. A.,	.	Sept. 27, 1900,	Oct. 18,	Dec. 17.
Somerset, .	.	.	.	1900	Winslow, D. H.,	.	May 31, 1900,	June 5,	Oct. 13.
South Hadley, .	.	.	.	1899	Cutter, F. P., .	.	Oct. 5, 1899,	April 20,	May 1.
South Hadley, .	.	.	.	1900	Gray, A. W., .	.	June 28, 1900,	July 10,	Oct. 10.
Spencer, .	.	.	.	1897	Power, E. P., .	.	Sept 14, 1899,	June 1,	July 1.
Spencer, .	.	.	.	1900	Warren, H. E.,	.	June 14, 1900,	Sept. 14,	Dec. 21.
Spencer, .	.	.	.	1900	Warren, H. E.,	.	Sept. 13, 1900,	Nov. 5,	Dec. 21.
Stonham, .	.	.	.	1900	Holden, H. C.,	.	Oct. 25, 1900,	Nov. 12,	Dec. 18.
Sudbury, .	.	.	.	1900	Winslow, G. R.,	.	Aug. 30, 1900,	Sept. 5,	Nov. 24.
Taunton, .	.	.	.	1900	Brines, L. R., .	.	Aug. 16, 1900,	Sept. 4,	Dec. 11.
Tewksbury, .	.	.	.	1900	Warren, H. E.,	.	July 5, 1900,	Sept. 31,	Sept. 8.
Townsend (1), .	.	.	.	1900	Phillips, H. D.,	.	Aug. 30, 1900,	Sept. 13,	Nov. 22.
Townsend (2), .	.	.	.	1900	Phillips, H. D.,	.	Nov. 1, 1900,	Nov. 9,	Dec. 24.
Truro, .	.	.	.	1895	Gray, A. W., .	.	Oct. 25, 1900,	Nov. 13,	Dec. 31.
Walpole, .	.	.	.	1900	Shaw, S.,	.	May 17, 1900,	June 4,	Dec. 8.
Ware, .	.	.	.	1899	Cutter, F. P., .	.	Oct. 5, 1899,	May 3,	June 13.
Warren, .	.	.	.	1900	Warren, H. E.,	.	Oct. 5, 1899,	April 10,	June 15.
Warren, .	.	.	.	1900	Warren, H. E.,	.	Aug. 23, 1900,	Sept. 10,	Dec. 13.
Wayland, .	.	.	.	1900	Winslow, G. R.,	.	June 7, 1900,	June 16,	Dec. 31.
Wayland, .	.	.	.	1900	Winslow, G. R.,	.	Aug. 30, 1900,	Sept. 19,	Dec. 31.



TABLE SHOWING TOWNS AND CITIES IN WHICH WORK HAS BEEN DONE, ETC. — *Concluded.*

TOWN OR CITY.	County.	Lay-out.	Resident Engineer.	Date of Contract.	Date of Beginning.	Date of Ending.
West Brookfield,	Worcester,	1899	Cutter, F. P.,	Sept. 7, 1899,	1900. May 3,	1900. June 13.
West Brookfield,	Worcester,	1900	Warren, H. E.,	May 3, 1900,	May 28,	July 28.
Westfield, .	Hampden,	1900	Southworth, A. L.,	Aug. 16, 1900,	Sept. 4,	Nov. 2.
Weston, .	Middlesex,	1898-9	Crosby, W. W.,	July 28, 1899,	April 2,	May 26.
Westwood,	Norfolk,	1899-1900	Shaw, S.,	Sept. 21, 1899,	Jan. 1,	July 31.
Westwood,	Norfolk,	1900	Shaw, S.,	Sept. 21, 1899,	June 4,	July 31.
Whately, .	Franklin,	1899	Gray, A. W.,	May 3, 1900,	May 30,	Aug. 10.
Winchester,	Middlesex,	1900	Holden, H. C.,	June 7, 1900,	July 12,	Sept. 25.
Woburn, .	Middlesex,	1900	Holden, H. C.,	Oct. 11, 1900,	Oct. 14,	Dec. 15.
Woburn, .	Middlesex,	1900	Bradford, J. L.,	Oct. 11, 1900,	Oct. 15,	Oct. 24.
Woburn, .	Middlesex,	1900	Wilbur, N. B.,	Oct. 11, 1900,	Nov. 15,	Nov. 21.
Woburn, .	Middlesex,	1900	Caldwell, F. W.,	Oct. 11, 1900,	Nov. 21,	Nov. 30.
Worcester,	Worcester,	1900	Fitz, C. F., Jr.,	Oct. 31, 1900,	Nov. 7,	Dec. 11.
Wrentham,	Norfolk,	1899	Litchfield, S., Jr.,	Aug. 31, 1899,	April 23,	June 13.
Wrentham (1),	Norfolk,	1900	Litchfield, S., Jr.,	May 24, 1900,	June 14,	July 13.
Wrentham (2),	Norfolk,	1900	Shaw, S.,	Aug. 23, 1900,	Sept. 4,	Nov. 10.



## APPENDIX C.

## STATEMENT OF CLAIMS AGAINST THE COMMISSION.

[As required by chapter 366, Acts of 1898.]

NAME.	Residence.	Nature of Claim.	Amount.	Remarks.
Bennett, J. C.,	Lynn, . .	Damages caused by taking of land in Lynn, . . . . .	-	Award not yet accepted.
Crowell, T. H.,	Somerville, .	Damages caused by construction of State road in Chatham, . . . . .	-	Suit entered.
Gookin, J. S.,	Revere, .	Damages caused by construction of State road in Revere, . . . . .	\$10 77 <sup>1</sup>	Award not yet accepted.
Gould, C. E.,	Leicester, .	Damages caused by taking of land and change of grade in Leicester, . . . . .	800 00	Suit entered.
Haviland, J. B.,	Ludlow, .	Bill for services in making surveys, . . . . .	948 74	Suit entered.
Massaemet Yarn Mills,	Colrain, .	Damages caused by construction of State road in Colrain, . . . . .	-	Suit entered.
Moseley, S. E.,	Revere, .	Damages caused by construction of State road in Revere, . . . . .	33 65 <sup>1</sup>	Award not yet accepted.
Parker, C. H.,	Revere, .	Damages caused by construction of State road in Revere, . . . . .	4 16 <sup>1</sup>	Award not yet accepted.
Smith, H. O.,	Leicester, .	Damages caused by construction of State road in Leicester, . . . . .	-	Suit entered.
Wilkins, M. A.,	Swampscott,	Damages caused by construction of State road in Swampscott, . . . . .	5 00 <sup>1</sup>	Award not yet accepted.
Wyman, I. C.,	Swampscott,	Damages caused by construction of State road in Swampscott, . . . . .	44 50 <sup>1</sup>	Suit entered.

<sup>1</sup> Amount awarded by commission.

## APPENDIX D.

## SHOWING CONTRACT PRICES ON

	TOWN OR CITY.	Number of Contract.	Contractor.	EXCAVATION.			RUBBLE MASONRY.		Gravel (Cubic Yard).
				All Kinds (Cubic Yard).	Borrow (Cubic Yard).	Ledge (Cubic Yard).	Dry (Cubic Yard).	Cement (Cubic Yard).	
1	Abington, . .	485	William P. Gallagher,	\$0 44	\$0 60	\$2 20	\$3 25	\$5 25	\$0 60
2	Acton, . . .	475	A. J. Wellington, .	30	40	2 00	6 00	10 00	40
3	Andover, . .	455	Town, . . . .	30	30	1 75	4 00	8 00	50
4	Attleborough,	476	Lake & Wood, . .	35	60	2 00	3 00	5 00	41 00 60
5	Barre, . . .	502	John S. Lane & Son, .	45	40	1 00	5 00	10 00	
6	Belchertown,	507	A. J. Wellington, .	50	50	3 00	6 00	12 00	-
7	Blackstone, .	496	Richard A. Clink, .	37	50	-	3 50	7 50	60
8	Braintree, . .	508	A. J. Wellington, .	50	-	2 00	6 00	12 00	80
9	Brockton, . .	441	City, . . . .	40	-	1 75	4 00	9 00	65
10	Brookfield, . .	463	Town, . . . .	35	50	1 75	5 00	9 00	60
11	Buckland, . .	456	Town, . . . .	35	40	1 75	4 00	8 00	55
12	Cheshire, . .	450	Polcaro & Ferranti, .	31	-	-	4 50	10 00	75
13	Chester, . . .	464	W. N. Flynt Granite Co.	50	50	2 00	-	10 00	-
14	Cohasset, . .	477	Town, . . . .	45	45	1 75	4 00	8 00	75
15	Concord, . .	518	Fred E. Ellis, . .	45	35	2 00	5 00	9 00	75
16	Dartmouth, . .	457	Town, . . . .	40	40	1 75	4 00	7 00	60
17	Deerfield, . .	515	Amos D. Bridge, .	30	40	-	6 00	12 00	65
18	Dennis, . . .	438	Bell & Co., . . .	50	-	-	4 00	8 00	-
19	Dennis, . . .	492	Uriel D. Phillips, .	30	-	-	3 00	4 00	-
20	Easthampton,	510	Town, . . . .	35	60	1 75	5 00	10 00	60
21	Easton, . . .	486	Town, . . . .	40	40	1 75	4 00	9 00	65
22	Edgartown, . .	499	Town, . . . .	25	25	1 75	5 00	10 00	1 00
23	Erving, . . .	445	James McGovern, .	32	-	2 00	4 00	10 00	485
24	Fitchburg, . .	465	D. H. Damon, . .	30	37	-	3 50	6 00	-
25	Gardner, . . .	478	A. J. Wellington, .	40	40	2 00	6 00	12 00	-

<sup>1</sup> Fifteen-inch clay pipe. <sup>2</sup> Ledge stone. <sup>3</sup> Eighteen-inch iron pipe. <sup>4</sup> Screened gravel.

## APPENDIX D.

## STATE ROADS DURING 1900.

Telford (Square Yard).	Shaping (Square Yard).	BROKEN STONE.		PIPE CULVERTS.				Fencing (Linear Foot).	Side Drains (Linear Foot).	Bounds (Each).	Catch-basins (Each).	
		Local (Ton).	Trap (Ton).	Twelve-inch Clay (Linear Foot).	Twenty-four-inch Clay (Linear Foot).	Twelve-inch Iron (Linear Foot).	Other Kinds (Linear Foot).					
-	\$0 07	\$1 65	-	\$0 50	1 \$0 65	\$1 50	-	\$0 25	\$0 33	\$2 25	-	1
-	03	-	\$1 80	70	-	-	-	25	-	1 50	-	2
\$0 30	02	1 40	21 60	60	-	1 30	<sup>3</sup> \$2 25	15	35	1 50	-	3
-	-	-	-	55	{ <sup>545</sup> 165 }	2 00	-	10	20	1 00	-	4
-	03	-	1 80	70	2 00	-	-	25	40	1 50	\$25 00	5
-	03	-	1 90	80	-	2 00	-	30	-	1 50	-	6
-	02 <sup>1</sup> / <sub>2</sub>	-	1 90	60	{ <sup>61</sup> 20 11 00 2 25 }	-	-	20	52	2 00	25 00	7
-	03	-	1 70	70	<sup>540</sup>	-	-	-	-	1 50	25 00	8
35	02	1 45	-	60	-	-	-	17	35	1 50	-	9
35	02	-	2 00	70	-	Cost.	-	17	35	1 50	-	10
35	02	-	2 00	70	{ <sup>61</sup> 15 2 00 }	-	-	17	40	1 50	Cost.	11
-	03	-	1 83	-	<sup>672</sup>	-	-	25	-	2 00	-	12
-	03	-	2 00	-	-	1 75	<sup>3</sup> 00	25	-	2 00	-	13
35	02	1 35	-	60	{ <sup>5</sup> Cost. <sup>7</sup> Cost. <sup>6</sup> Cost. }	-	-	15	40	1 30	Cost.	14
-	03	-	1 70	-	-	1 75	<sup>32</sup> 25	18	40	1 50	-	15
30	02	1 40	-	60	{ <sup>540</sup> 175 }	-	-	15	35	1 50	-	16
-	03	-	1 65	-	-	75	-	25	-	1 50	-	17
-	03	-	2 23 <sup>1</sup> / <sub>2</sub>	-	<sup>535</sup>	-	-	20	-	1 10	25 00	18
-	02 <sup>1</sup> / <sub>2</sub>	-	2 40	-	<sup>560</sup>	-	-	-	-	1 00	25 00	19
-	02	-	1 15	60	<sup>7</sup> Cost.	-	-	20	35	1 25	25 00	20
30	02	1 45	-	65	<sup>5</sup> Cost.	-	-	17	35	1 25	Cost.	21
40	02	1 95	-	65	-	-	-	20	35	1 50	-	22
-	-	-	-	50	{ <sup>660</sup> 1 00 }	-	-	30	45	1 50	35 00	23
-	02	1 62	-	-	-	-	-	20	-	1 50	-	24
-	-	-	-	80	-	-	-	25	50	1 50	-	25

<sup>5</sup> Eight-inch clay pipe.<sup>6</sup> Eighteen-inch clay pipe.<sup>7</sup> Ten-inch clay pipe.

## SHOWING CONTRACT PRICES ON

	TOWN OR CITY.	Number of Contract.	Contractor.	EXCAVATION.			RUBBLE MASONRY.		Gravel (Cubic Yard).
				All Kinds (Cubic Yard).	Borrow (Cubic Yard).	Ledge (Cubic Yard).	Dry (Cubic Yard).	Cement (Cubic Yard).	
1	Gardner, . . .	479	Amos D. Bridge, .	-	-	-	-	-	-
2	Grafton, . . .	435	Town, . . . .	\$0 40	\$0 50	\$1 75	\$4 50	\$10 00	\$0 60
3	Greenfield, . . .	487	Town, . . . .	45	-	2 00	5 00	9 00	65
4	Groveland, . . .	511	Town, . . . .	35	55	1 75	5 00	10 00	60
5	Hamilton, . . .	443	Town, . . . .	40	50	1 75	5 00	9 00	50
6	Harvard, . . .	514	Tuttle & Edgerly, .	35	-	80	3 00	7 00	-
7	Harwich, . . .	439	William F. Crapo, .	20	30	-	3 00	4 00	-
8	Harwich, . . .	500	J. Fletcher Doane, .	25	-	-	5 00	12 00	-
9	Haverhill, . . .	516	George H. Mansur, .	25	27	1 50	5 00	7 00	55
10	Holden, . . . .	458	Town, . . . .	35	45	1 75	4 00	9 00	65
11	Lee, <sup>8</sup> . . . .	459	Town, . . . .	-	-	-	-	-	-
12	Lenox, . . . .	454	Town, . . . .	35	50	1 50	4 00	8 00	1 20
13	Lexington, . . .	491	Town, . . . .	35	50	1 75	4 50	10 00	60
14	Lunenburg, . . .	466	A. J. Wellington, .	50	-	2 00	5 00	12 00	-
15	Marlborough, . .	480	City, . . . .	35	50	<sup>103 00</sup> 1 75	4 00	9 00	75
16	Mattapoisett, . .	460	Town, . . . .	35	35	1 75	5 00	9 00	60
17	Methuen, . . .	488	Fred E. Ellis, . . .	40	45	2 00	6 00	10 00	60
18	Millbury, . . .	512	A. J. Wellington, .	40	50	-	5 00	10 00	60
19	Milton, . . . .	493	William P. Gallagher,	34	-	2 00	3 75	7 50	50
20	Nantucket, . . .	494	Rollin M. Allen, . .	28	<sup>1</sup> 75	-	6 00	10 00	<sup>131</sup> 10
21	Newbury, . . .	495	M. Cashman, . . .	28	35	2 00	4 00	6 00	45
22	North Adams, . .	489	John S. Lane & Son, .	35	40	2 00	4 00	10 00	-
23	North Andover, .	431	Adams & Daw, . . .	35	35	2 00	3 50	7 00	50
24	Northborough, .	503	Asa Goddard, . . .	45	45	1 75	5 00	11 00	60
25	Orleans, . . . .	469	William F. Crapo, .	30	-	-	5 00	10 00	-
26	Palmer, . . . .	451	Amos D. Bridge, . .	40	-	-	4 00	10 00	60
27	Princeton, . . .	519	Amos D. Bridge, . .	50	50	1 75	4 00	12 00	75
28	Quincy, . . . .	433	City, . . . .	40	40	1 75	3 50	7 00	80
29	Reading and Stoneham.	504	Adams & Daw, . . .	50	-	2 00	3 50	7 00	60

<sup>1</sup> Eighteen-inch clay pipe.<sup>2</sup> Eighteen-inch iron pipe.<sup>3</sup> Twenty-four-inch iron pipe.<sup>4</sup> Fifteen-inch clay pipe.<sup>5</sup> Ten-inch clay pipe.<sup>6</sup> Eight-inch clay pipe.<sup>7</sup> Leaching basins.<sup>8</sup> Lump sum, \$13,500.

## STATE ROADS DURING 1900—Continued.

Telford (Square Yard).	Shaping (Square Yard).	BROKEN STONE.		PIPE CULVERTS.				Fencing (Linear Foot).	Side Drains (Linear Foot).	Bounds (Each).	Catch-basins (Each).	
		Local (Ton).	Trap (Ton).	Twelve-inch Clay (Linear Foot).	Twenty-four-inch Clay (Linear Foot).	Twelve-inch Iron (Linear Foot).	Other Kinds (Linear Foot).					
-	-	-	\$2 35	-	-	-	-	-	-	-	-	1
\$0 35.	\$0 02	-	1 90	\$0 60	<sup>1</sup> Cost.	-	<sup>2</sup> Cost. <sup>3</sup> Cost.	\$0 15	\$0 40	\$1 50	Cost.	2
30	02	-	1 25	-	<sup>1</sup> \$1 25	-	-	17	35	1 50	Cost.	3
35	02	-	2 10	65	<sup>4</sup> 90 <sup>5</sup> 50 <sup>6</sup> Cost.	\$1 40	<sup>2</sup> Cost.	17	35	1 50	Cost.	4
35	02	\$1 60	-	-	<sup>7</sup> 75 <sup>8</sup> 2 00	-	<sup>3</sup> \$4 00	15	35	1 50	Cost.	5
-	-	-	-	50	<sup>9</sup> 40 <sup>10</sup> 2 00	-	-	14	35	2 00	-	6
-	02	-	2 20	-	<sup>11</sup> 32 <sup>12</sup> 1 25	-	-	-	-	1 00	\$25 00	7
-	02	-	2 13	-	<sup>13</sup> 25	-	-	27	-	1 00	<sup>14</sup> 20 00 <sup>15</sup> 25 00	8
-	-	-	-	55	-	2 00	-	18	30	-	10 00	9
30	02	1 50	-	60	-	-	-	15	35	1 50	-	10
-	-	-	-	-	-	-	-	-	-	-	-	11
35	02	1 20	2 50	60	-	1 50	<sup>16</sup> 2 50	20	40	1 75	-	12
30	02	1 50	-	65	-	-	<sup>17</sup> 50	17	35	1 50	Cost.	13
-	03	1 60	2 00	80	-	-	-	30	50	1 50	-	14
30	02	1 35	-	60	-	Cost.	<sup>18</sup> Cost.	15	35	1 50	-	15
30	02	1 30	-	70	<sup>19</sup> Cost. <sup>20</sup> Cost. <sup>21</sup> 55	-	-	17	35	1 50	-	16
-	03	-	1 75	60	<sup>22</sup> 1 50	-	-	20	40	1 50	25 00	17
-	03	-	2 00	70	2 00	-	-	25	50	1 50	-	18
-	03	-	1 45	-	-	-	-	20	-	1 50	-	19
-	02 <sup>1</sup> / <sub>2</sub>	2 50	-	80	-	-	-	20	-	1 50	-	20
-	02	1 20	-	60	-	1 25	-	20	28	1 25	20 00	21
-	03	-	1 75	-	<sup>23</sup> 55 <sup>24</sup> 1 00	-	<sup>25</sup> 00	20	35	1 50	-	22
-	02	1 35	1 90	-	<sup>26</sup> 55 <sup>27</sup> 1 60	-	<sup>28</sup> 50	20	35	1 40	-	23
-	02 <sup>1</sup> / <sub>2</sub>	1 50	-	-	-	-	-	20	35	2 00	-	24
-	02 <sup>1</sup> / <sub>2</sub>	1 32	-	70	-	-	-	30	-	1 50	25 00	25
-	03	-	1 85	75	2 50	-	-	25	40	1 75	-	26
-	03	1 55	-	90	-	1 75	-	25	45	1 75	-	27
30	02	-	2 20	60	<sup>29</sup> 40 <sup>30</sup> 55 <sup>31</sup> 45	-	<sup>32</sup> 30	15	35	1 50	Cost.	28
-	03	1 40	-	60	<sup>33</sup> 45 <sup>34</sup> 75 <sup>35</sup> 1 42	1 75	<sup>36</sup> 73	20	35	1 50	22 00	29

<sup>9</sup> Cobble-stone gutters.<sup>10</sup> Ledge in drains.<sup>11</sup> Twenty-inch clay pipe.<sup>12</sup> Clay.<sup>13</sup> Screened gravel.<sup>14</sup> Relaying gutters.<sup>15</sup> Twenty-inch iron pipe.



## SHOWING CONTRACT PRICES ON

	TOWN OR CITY.	Number of Contract.	Contractor.	EXCAVATION.			RUBBLE MASONRY.		Gravel (Cubic Yard).
				All Kinds (Cubic Yard).	Borrow (Cubic Yard).	Ledge (Cubic Yard).	Dry (Cubic Yard).	Cement (Cubic Yard).	
1	Revere and Saugus,	434	Joseph Ross, . . .	\$5 00	\$3 00	-	\$5 95	\$7 95	-
2	Revere and Saugus <sup>4</sup>	448	Joseph Ross, . . .	-	-	-	-	-	-
3	Sandwich, . . .	470	Asa Goddard, . . .	25	30	-	5 00	10 00	-
4	Scituate, . . .	471	John S. Lane & Son, .	40	65	\$2 00	5 00	10 00	\$0 65
5	Seekonk, . . .	483	Town, . . . . .	35	35	1 75	5 00	10 00	55
6	Shrewsbury, . .	490	Amos D. Bridge, . .	50	-	1 50	5 00	10 00	70
7	Somerset, . . .	444	Town, . . . . .	40	40	1 75	4 00	8 00	65
8	South Hadley, .	452	A. J. Wellington, . .	40	-	-	6 00	12 00	50
9	Spencer, . . .	449	Town, . . . . .	35	40	1 75	5 00	10 00	1 00
10	Spencer, . . .	482	Town, . . . . .	35	40	1 75	5 00	10 00	1 00
11	Sudbury, . . .	472	White & Gaffey, . . .	40	45	2 00	4 00	8 00	50
12	Swampscott, . .	517	Michael McDonough, .	25	45	1 50	3 50	5 00	50
13	Taunton, . . .	461	City, . . . . .	35	40	1 75	4 00	9 00	60
14	Tewksbury, . .	433	William H. Mague, . .	35	-	2 00	-	10 00	60
15	Townsend, . . .	473	A. J. Wellington, . .	50	50	-	5 00	10 00	-
16	Townsend, <sup>15</sup> . .	506	Town, . . . . .	-	-	-	-	-	-
17	Truro, . . . .	505	C. W. Snow, . . . .	20	-	-	-	-	-
18	Walpole, . . .	440	D. W. McKinney & Co.,	30	40	1 75	-	10 00	40
19	Warren, . . . .	467	Amos D. Bridge, . . .	47	-	1 50	4 00	10 00	45
20	Wayland, . . .	446	William H. Mague, . .	35	50	2 00	4 00	10 00	50
21	Wayland, . . .	474	White & Gaffey, . . .	33	35	1 00	4 00	10 00	40
22	West Brookfield, .	436	J. S. Lane & Son, . .	40	45	-	4 00	10 00	75
23	Westfield, . . .	462	Town, . . . . .	35	40	1 75	4 00	8 00	50
24	Whately, . . .	437	A. J. Wellington, . .	30	40	-	8 00	12 00	-
25	Winchester, . .	447	Town, . . . . .	25	60	90	5 00	9 00	60
26	Woburn, . . . .	497	City, . . . . .	30	60	1 50	5 00	9 00	60
27	Worcester, . . .	498	A. J. Wellington, . .	40	40	3 00	5 00	12 00	50
28	Wrentham, . . .	442	Town, . . . . .	35	35	1 75	5 00	9 00	60
29	Wrentham, . . .	468	Town, . . . . .	40	40	1 75	5 00	9 00	60

<sup>1</sup> Spruce piles in place.<sup>2</sup> Stone filling around piles.<sup>3</sup> Spruce timber per M.<sup>4</sup> Lump sum contract for superstructure of bridges.<sup>5</sup> Ten-inch clay pipe.<sup>6</sup> Fifteen-inch clay pipe.<sup>7</sup> Fifteen-inch iron pipe.<sup>8</sup> Eight-inch clay pipe.



STATE ROADS DURING 1900 — *Concluded.*

Telford (Square Yard).	Shaping (Square Yard).	BROKEN STONE.		PIPE CULVERTS.				Fencing (Linear Foot).	Side Drains (Linear Foot).	Bounds (Each).	Catch-basins (Each).	
		Local (Ton).	Trap (Ton).	Twelve-inch Clay (Linear Foot).	Twenty-four-inch Clay (Linear Foot).	Twelve-inch Iron (Linear Foot).	Other Kinds (Linear Foot).					
-	-	-	-	-	-	-	-	-	-	-	\$37 00	1
-	-	-	-	-	-	-	-	-	-	-	-	2
-	40 02	\$1 80	-	\$0 70	<sup>5</sup> \$0 70 <sub>680</sub>	-	-	40 20	-	\$1 50	30 00	3
-	03	1 65	-	70	-	\$2 00	<sup>7</sup> \$2 75	25	-	1 50	25 00	4
\$0 30	02	1 35	-	65	<sup>8</sup> Cost <sup>9</sup> Cost	-	-	17	\$0 35	1 50	-	5
-	03	1 50	-	90	-	-	<sup>10</sup> 50	25	45	1 75	25 00	6
35	02	1 50	-	60	-	1 50	-	17	35	1 50	-	7
-	03	-	\$1 75	75	-	-	-	25	50	1 50	20 00	8
35	02	1 40	2 00	60	-	1 40	-	15	35	1 50	-	9
35	02	1 40	2 00	60	-	1 40	-	15	35	1 50	-	10
-	02 $\frac{1}{2}$	1 50	-	-	<sup>8</sup> 43 <sup>11</sup> 89	-	<sup>12</sup> 3 00 <sup>13</sup> 3 50	20	40	1 50	-	11
-	02	-	1 75	40	<sup>5</sup> 35	-	<sup>14</sup> 90 <sup>15</sup> 2 00	22	35	1 50	30 00	12
35	02	1 50	-	70	-	-	-	17	40	1 50	-	13
-	03	-	1 80	75	<sup>11</sup> 1 00	-	-	25	40	2 00	30 00	14
-	03	-	2 10	80	-	1 60	-	30	-	1 50	25 00	15
-	-	-	-	-	-	-	-	-	-	-	-	16
-	-	-	-	-	-	-	-	15	-	1 00	-	17
-	02	1 25	-	50	-	-	-	20	40	1 00	20 00	18
-	03	-	1 90	75	3 00	1 75	<sup>16</sup> 4 00	25	35	1 75	-	19
-	02	1 50	-	70	<sup>11</sup> 1 00	-	-	25	40	1 50	20 00	20
-	02	1 55	-	-	-	-	-	20	35	1 50	-	21
-	03	-	1 85	70	2 25	1 75	<sup>16</sup> 4 00	25	45	1 50	-	23
35	02	-	1 60	70	-	-	-	15	35	1 50	-	24
-	03	-	1 70	70	-	-	-	25	-	1 50	-	25
30	02	1 15	-	-	<sup>2</sup> 00 <sup>11</sup> 25	1 30	<sup>14</sup> 1 10	15	25	1 25	<sup>17</sup> Cost. Cost.	<sup>26</sup>
30	02	1 15	-	75	<sup>2</sup> 25 <sup>5</sup> Cost. <sup>9</sup> Cost.	1 30	<sup>16</sup> 2 60	20	30	1 25	25 00	27
-	03	-	2 30	1 00	-	1 80	-	30	50	1 50	-	28
30	02	1 60	-	60	-	-	-	15	35	1 25	Cost.	29
30	02	1 60	-	70	-	-	-	17	35	1 40	-	30

<sup>9</sup> Twenty-inch clay pipe.<sup>10</sup> Cobble-stone gutters.<sup>11</sup> Eighteen-inch clay pipe.<sup>12</sup> Sixteen-inch iron pipe.<sup>13</sup> Eighteen-inch iron pipe.<sup>14</sup> Ten-inch iron pipe.<sup>15</sup> Lump sum, \$1,500.<sup>16</sup> Twenty-four-inch iron pipe.<sup>17</sup> Leaching basins.

## APPENDIX E.

## THE DISTRIBUTION OF STATE ROADS IN THE COMMONWEALTH.

For the information of the many interested in this question, the following is reprinted from the report of 1897 :—

The selection of roadways which shall be rebuilt as State roads at the expense of the Commonwealth is naturally the most difficult problem with which the commission has to deal. The nature of that problem will be more readily understood after an examination of the map of the State, which forms a part of this report, on which is laid down, in addition to county and town boundaries, the roadways which the commission has been petitioned to take, and those which it has up to this date actually accepted as State roads, nearly all of the latter having been actually constructed.

Under the provisions of the law the commissioners are not permitted to control the expenditure of the appropriation entirely by their own judgment. They are restricted to two provisions, the wisdom of which they do not at all criticise, but which should always be kept in mind in considering the results of their labors. The first of these is that "all constructions of State roads shall be fairly apportioned among the different counties," and in this they have been guided in the main by the relative miles of roadway existing in the several counties. The second is the restriction growing out of the use of the petition. It was obviously the intention of the Legislature to limit the initiative of the Highway Commission in planning for the location of State ways. As is well known, the commission cannot of its own motion accept or reject any route; it has to await the petitions of the municipalities or the county commissioners. The only manner in which it can effect any satisfactory grouping of these petitions, so that continuous routes may come from the constructive work, is by rejecting the petitions which may come to it, or by counselling with the authorities having the right to petition in advance of their formal requests.

In order to keep the State roads from having a total lack of ultimate purpose in their relations to each other in the distribution of the Commonwealth, the commission has been compelled gradually, though not formally, to come to a state of mind as regards the selection of roads which are to be taken. In part this rather undetermined project is indicated by the distribution of the routes which have been accepted, as is shown on the accompanying map.\* In part, though less distinctly, it is indicated by the direction of the petitions, the greater part of which have been submitted after more or less conference with the commission.

It appears to your commission that the time has now come when some statement, still necessarily tentative, shall be made which will set forth in a general way the views of the commission as to the policy to be followed by the Commonwealth in the construction of State roads. This statement is submitted in no sense as a hard-and-fast plan, but in order to set forth the direction in which the work of the commission is inevitably drifting; and we should hope that this statement may provoke criticism, and, if need be, modification of the action.

It seems, in the first place, clear that the most important of the many needs which are to be met by the construction of State roads is that which relates to the connection of centres of business in the Commonwealth with each other, in so far as the business relations demand this connection. Thus, where two towns have a large exchange of relations, the way lying through other towns which profit little by the traffic, there is good reason why the State should take charge of the main connecting way.

Closely related to this is the case of a considerable number of smaller, less populous towns, surrounding a large city or centre of dense population, with which they have intimate business relations. It furnishes the market for their products, and the profit to the producer as well as the cost to the consumers is largely determined by the cost of local transportation. Even where facilities for transportation by rail exist, there is still much use of the public highway whenever it is in reasonably good condition. It is in evidence before the commission that many articles of produce, especially perishable and delicate fruits, are preferably sent many miles to the city markets in farm wagons, where shipping by rail would be both quicker and cheaper, on account of the better condition in which they may be delivered.

In making its selections among numerous petitions, the commission has endeavored to keep in mind the great advantages arising from

---

\* See end of report.

easy connections between large centres of population and the surrounding agricultural areas; for in so doing the demands of both urban and suburban populations are recognized, and their mutual interests promoted.

Another class of cases arises, in which one or more towns lie remote from the rail or water ways, losing opportunities of advancement on account of this hindrance. These conditions are in some cases so grave that the average cost during the year of transporting a ton of freight from a village otherwise well placed for manufacturing to the business centres of the Commonwealth is greater than would be incurred in transporting the same burden from the central portion of the Mississippi valley to the city of Boston. In these cases, also, the commission feels impelled to better the traffic conditions by improving the way.

In yet other but not numerous cases, portions of the State adjacent to this Commonwealth have their natural business centres in some of our cities or towns, but the people thus residing beyond the bounds of the Commonwealth are deterred from seeking access to its markets by the difficulties of the way. In such instances it seems desirable that good roads should be provided to the bounds of the Commonwealth.

The conditions above mentioned may be regarded as of a local character. There remains yet another of such interests of a general nature to be provided for. These will be met by so grouping the State roads that they will in the end afford continuous routes through the Commonwealth, which may serve the interests of pleasure travel or the occasional distant carriage which would be done by ordinary wagons where the roads were good. These extended ways, including in general those which relate to driving for a distance of more than fifteen miles, are of greater importance to the interests of the Commonwealth than might at first sight appear. A considerable part of the present and much of the prospective value of real estate in the Commonwealth, as well as the traffic which takes place therein, is due to the incoming of people from the central and western parts of the country, who seek summer residences and family homes in the very attractive rural districts of the State. People who thus resort to the Commonwealth for recreation desire opportunities for driving such as would be afforded by a well-regulated system of State ways, which would be laid out and beautified with some reference to the natural and historic interests of the country. It is hardly necessary to say that the use of the bicycle for pleasure travel would also be thus accommodated.

Although the commissioners do not propose to build roads which relate only or even mainly to pleasure travel, they feel that the ser-

vice which can be done by a system which relates to such travel is so great and of such economic importance to the Commonwealth that it should always be kept in mind.

An examination of the map referred to above will reveal in some degree the groupings of highways up to this time, as indicated by petitions and by acceptance. A few rather long, continuous lines of State highway are apparently demanded at the present time, and their construction ought to be kept in view in the acceptance of petitions; but the commission must not allow itself to be too much influenced by an adjustment of petitions, which often stand only for local interest and activity. While there is often good reason for accepting one highway on account of local conditions, although it may not form a part of any general scheme, and another because it does fit into such a scheme, although of less local value than another which may be near by, there is often equally good reason for postponing action on a third because it is relatively of less *immediate* importance than either of the others.

The commissioners are of the opinion that nearly every mile of road thus far petitioned for should some time be built as a State highway; but it is clear that, as only a comparatively small number of miles can be completed annually, some selection must be made.

In choosing which shall be undertaken first, the commissioners must be governed by considerations of the broadest character, many of which will not be evident to those who necessarily think most of local interests. The order of presentation of petitions can have no influence, nor should it be inferred that, because a petition is not granted this year, it may not be next, or the year after. Outside of the limitations put upon them by the statute, the commissioners are bound to exercise their best judgment in all cases; and, while they are likely to be far from infallible, and welcome fair criticism, all who are unselfishly interested in the extension of this important system of State highway construction are likely to accept the judgment as the result of a comprehensive knowledge of the whole situation, growing out of the necessary consideration of the scheme as a whole.



## APPENDIX F.

GENERAL STATUTES RELATING TO THE WORK  
OF THE COMMISSION.\*

[ACTS OF 1893, CHAPTER 476.]

AN ACT TO PROVIDE FOR THE APPOINTMENT OF A HIGHWAY COMMISSION TO IMPROVE THE PUBLIC ROADS AND TO DEFINE ITS POWERS AND DUTIES.

*Be it enacted, etc., as follows:*

SECTION 1. [This section was repealed by Acts of 1900, chapter 474, section 2.]

To compile statistics, make investigations, advise officers, prepare maps, etc.

SECTION 2. They shall from time to time compile statistics relating to the public roads of cities, towns and counties, and make such investigations relating thereto as they shall deem expedient. They may be consulted at all reasonable times, without charge, by officers of counties, cities or towns having the care of and authority over public roads, and shall without charge advise them relative to the construction, repair, alteration or maintenance of the same; but advice given by them to any such officers shall not impair the legal duties and obligations of any county, city or town. They shall prepare a map or maps of the Commonwealth on which shall be shown county, city and town boundaries and also the public roads, particularly the state highways, giving, when practicable, the names of the same. They shall collect and collate information concerning the geological formation of this Commonwealth, so far as it relates to the material suitable and proper for road building, and shall, so far as practicable, designate on said map or maps the location of such material. Such map or maps shall at all

---

\* All special acts and all appropriation acts, except those of 1900, are omitted.



reasonable times be open for the inspection of officers of counties, cities and towns having the care of and authority over public roads. They shall each year hold at least one public meeting in each county for the open discussion of questions relating to the public roads, due notice of which shall be given in the press or otherwise.

Massachusetts  
Highway Com-  
mission to hold  
public meetings.

SECTION 3. They shall make an annual report to the legislature of their doings and the expenditures of their office, together with such statements, facts and explanations bearing upon the construction and maintenance of public roads, and such suggestions and recommendations as to the general policy of the Commonwealth in respect to the same as may seem to them appropriate. Their report shall be transmitted to the secretary of the Commonwealth on or before the first Wednesday in January of each year, to be laid before the legislature. All maps, plans and statistics collected and compiled under their direction shall be preserved in their office.

Annual report,  
etc.

SECTION 4. County commissioners and city and town officers having the care of and authority over public roads and bridges throughout the Commonwealth shall, on request, furnish the commissioners any information required by them concerning the roads and bridges within their jurisdiction.

Officers to fur-  
nish commis-  
sion with infor-  
mation.

SECTION 5. For the purpose of carrying out the provisions of this act said commission may expend such sums for necessary assistants, the procuring of necessary supplies, instruments, material, machinery and other property, and for the construction and maintenance of state highways, as shall from time to time be appropriated by the legislature; and they shall in their annual report state what sums they deem necessary for the year commencing with the first day of March following.

Expenditure.

SECTIONS 6-9. [These sections were repealed by Acts of 1894, chapter 497, section 9.]

SECTION 10. For the maintenance of state highways, said commission shall contract with the city or town in which such state highway lies, or a person, firm or corporation, for the keeping in repair and maintaining of such highway, in accordance with the rules and regulations of said commission, and subject to their supervision

Maintenance.  
See 1900, 432,  
§ 1.

and approval, and such contracts may be made without previous advertisement.

SECTION 11. [This section was repealed by Acts of 1894, chapter 497, section 9.]

Rights of adjoining owner or occupant, etc.

SECTION 12. No length of possession, or occupancy of land within the limit of any state highway, by an owner or occupier of adjoining land, shall create a right to such land in any adjoining owner or occupant or a person claiming under him, and any fences, buildings, sheds or other obstructions encroaching upon such state highway shall, upon written notice by said commission, at once be removed by the owner or occupier of adjoining land, and if not so removed said commission may cause the same to be done and may remove the same upon the adjoining land of such owner or occupier.

SECTION 13. [This section was repealed by Acts of 1894, chapter 497, section 9.]

Police jurisdiction, laying pipes, planting trees, etc.

SECTION 14. Cities and towns shall have police jurisdiction over all state highways, and they shall at once notify in writing the state commission or its employees of any defect or want of repair in such highways. No state highway shall be dug up for laying or placing pipes, sewers, posts, wires, railways or other purposes, and no tree shall be planted or removed or obstruction placed thereon, except by the written consent of the superintendent of streets or road commissioners of a city or town, approved by the highway commission, and then only in accordance with the rules and regulations of said commission; and in all cases the work shall be executed under the supervision and to the satisfaction of said commission, and the entire expense of replacing the highway in as good condition as before shall be paid by the parties to whom the consent was given or by whom the work was done; but a city or town shall have the right to dig up such state highway without such approval of the highway commission where immediate necessity demands it, but in all such cases such highway shall be at once replaced in as good condition as before, and at the expense of the city or town. Said commission shall give suitable names to the state highways, and they shall have the right to change the name of any road that shall have

Names, guide posts, etc.

become a part of a state highway. They shall cause to be erected, at convenient points along state highways, suitable guide posts.

SECTION 15. The word "road," as used in this act includes every thoroughfare which the public has a right to use. The word "road" defined.

SECTION 16. This act shall take effect upon its passage.

*Approved June 10, 1893.*

---

[ACTS OF 1894, CHAPTER 497.]

AN ACT RELATING TO STATE HIGHWAYS.

*Be it enacted, etc., as follows:*

SECTION 1. Whenever the county commissioners of a county, or the mayor and aldermen of a city, or the selectmen of a town, adjudge that the public necessity and convenience require that the Commonwealth take charge of a new or an existing road as a highway, in whole or in part, in that county, city or town, they may apply by a petition in writing to the Massachusetts highway commission, stating the road they recommend, together with a plan and profile of the same. Petition for the taking of certain roads as state highways. Amended by 1898, 476, § 1.

SECTION 2. Said highway commission shall consider such petition and determine what the public necessity and convenience require in the premises, and, if they deem that the highway should be laid out or be taken charge of by the Commonwealth, shall file a plan thereof in the office of the county commissioners of the county in which the petitioners reside, with the petition therefor and a certificate that they have laid out and taken charge of said highway in accordance with said plan, and shall file a copy of the plan and location of the portion lying in each city or town in the office of the clerk of said city or town, and said highway shall, after the filing of said plans, be laid out as a highway, and shall be constructed and kept in good repair and condition as a highway by the said commission, at the expense of the Commonwealth, and shall be known as a state road, and thereafter be maintained by the Commonwealth under the supervision of said commission. And all openings and placing of Proceedings of highway commissioners upon petition, etc. Amended by 1897, 355, § 1.

structures in any such road shall be done in accordance with a permit from said commission.

**Damages.**

SECTION 3. The damages sustained by any person whose property is taken for, or is injured by the construction of any such highway shall be paid by the Commonwealth, the same to be determined by said commission. And if said commission and the person sustaining the damages cannot agree thereon he or they may have said damages determined by a jury in the county in which the land is situated, by filing a petition for such jury in the office of the clerk of the superior court for said county at any time before the expiration of one year from the completion of said highway, and thereupon said damages shall be determined by a jury at the bar of said court, in the same manner as damages for the taking of land for other highways in the county, city or town are determined; and costs shall be taxed to the prevailing party on such petition, as in civil cases.

Construction of highways, notice to cities and towns, bids, proposals, etc. Amended by 1896, 345, § 3; 1897, 355, § 2; 1900, 404, § 1.

SECTION 4. Said commission shall, when about to construct any highway, give to each city and town in which said highway lies a certified copy of the plans and specifications for said highway, with a notice that said commission is ready for the construction of said road. Such city or town shall have the right, without advertisement, to contract with said commission for the construction of so much of such highway as lies within its limits, in accordance with the plans and specifications, and under its supervision and subject to its approval, at a price agreed upon between said commission and said city or town. If said city or town shall not elect to so contract within thirty days said commission shall advertise in two or more papers published in the county where the road or portion of it is situated, and in three or more daily papers published in Boston, for bids for the construction of said highway under their supervision and subject to their approval, in accordance with plans and specifications to be furnished by said commission. Such advertisements shall state the time and place for opening the proposals in answer to said advertisements, and reserve the right to reject any and all proposals. All such proposals shall be sealed and shall be kept by the board, and shall be open to public



inspection after said proposals have been accepted or rejected. Said commission may reject any or all bids, or if a bid is satisfactory they shall, with the approval of the governor and council, make a contract in writing on behalf of the Commonwealth for said construction, and shall require of the contractor a bond for at least twenty-five per cent. of the contract price to indemnify any city or town in which such highway lies against damage while such road is being constructed; and the Commonwealth shall not be liable for any damage occasioned thereby.

All construction of state roads shall be fairly apportioned by said commission among the different counties, and not more than ten miles of state road shall be constructed in any one county in any one year on petition as aforesaid, without the previous approval thereof in writing by the governor and council.

Construction to be apportioned among the different counties.

SECTION 5. One quarter of any money expended under the provisions of this act in any county for a highway, with interest on said quarter at the rate of three per cent. per annum, shall be repaid by said county to the Commonwealth, in such reasonable sums and at such times within six years thereafter as said commission, with the approval of the state auditor, shall determine, taking into consideration the financial condition of the county; and the treasurer and receiver-general shall apply all money so repaid to the appropriation to be expended by said commission. The county treasurer, with the approval of the county commissioners, may make such loans as they may see fit to meet this expenditure.

Portion of money expended to be repaid by county, etc.

SECTION 6. [This section was repealed by Acts of 1900, chapter 253, section 3.]

SECTION 7. Said commission shall keep all state roads reasonably clear of brush, and shall cause suitable shade trees to be set out along said highways when feasible, and shall renew the same when necessary, and may also establish and maintain watering troughs at suitable places along said highways.

Shade trees, watering troughs, etc.

SECTION 8. For the purpose of meeting any expenses that may be incurred under the provisions of chapter four hundred and seventy-six of the acts of the year eighteen hundred and ninety-three, as hereby amended, including

State Highway Loan.

the salaries and expenses of the commission, the treasurer and receiver-general is hereby authorized, with the approval of the governor and council, to issue scrip or certificates of indebtedness to an amount not exceeding three hundred thousand dollars, for a term not exceeding thirty years. Said scrip or certificates of indebtedness shall be issued as registered bonds or with interest coupons attached, and shall bear interest not exceeding four per cent. per annum, payable semi-annually on the first days of April and October in each year. Such scrip or certificates of indebtedness shall be designated on the face as the State Highway Loan, shall be countersigned by the governor, and shall be deemed a pledge of the faith and credit of the Commonwealth, and the principal and interest shall be paid at the times specified therein in gold coin of the United States or its equivalent; and said scrip or certificates of indebtedness shall be sold and disposed of at public auction or in such other mode and at such times and prices and in such amounts and at such rates of interest, not exceeding the rate above specified, as shall be deemed best. The treasurer and receiver-general shall, on issuing any of said scrip or certificates of indebtedness, establish a sinking fund for the payment of said bonds, into which shall be paid any premiums received on the sale of said bonds, and he shall apportion thereto from year to year, in addition, amounts sufficient with the accumulations to extinguish at maturity the debt incurred by the issue of said bonds. The amount necessary to meet the annual sinking fund requirements and to pay the interest on said bonds shall be raised by taxation from year to year.

Sinking fund.

Repeal.

SECTION 9. Sections six, seven, eight, nine, eleven and thirteen of chapter four hundred and seventy-six of the acts of the year eighteen hundred and ninety-three are hereby repealed.

SECTION 10. This act shall take effect upon its passage.

*Approved June 20, 1894.*



[ACTS OF 1896, CHAPTER 345.]

## AN ACT RELATIVE TO STATE HIGHWAYS.

*Be it enacted, etc., as follows:*

SECTION 1. When a highway is laid out as a state road the Massachusetts highway commission shall construct and maintain that portion of the way between the inside lines of sidewalks upon either side. The sidewalks of said road may be constructed and maintained in accordance with the Public Statutes and amendments thereto, and the provisions of section six of chapter four hundred and ninety-seven of the acts of the year eighteen hundred and ninety-four shall only apply to that portion of the way between the inside lines of sidewalks. The inside lines of sidewalks referred to in this section are those lines which are nearest to the centre of the highway.

Construction,  
etc., of state  
highways.

Sidewalks.

SECTION 2. A city or town in which a state road lies shall at its own expense keep such road sufficiently clear of snow and ice so that the same shall be reasonably safe for travel, as now required by the Public Statutes and amendments thereto.

State roads to  
be kept clear of  
snow and ice,  
etc.

SECTION 3. Instead of filing the original petition with the county commissioners, as now required by section two of chapter four hundred and ninety-seven of the acts of the year eighteen hundred and ninety-four, it shall hereafter be sufficient to file a certified copy thereof with said county commissioners.

Copy of petition  
may be filed  
with county  
commissioners.

SECTION 4. This act shall take effect upon its passage.

*Approved April 28, 1896.*

[ACTS OF 1896, CHAPTER 513.]

## AN ACT TO PROVIDE FOR AIDING TOWNS IN THE CONSTRUCTION AND MAINTENANCE OF BETTER ROADS.

*Be it enacted, etc., as follows:*

SECTION 1. Upon the application to the Massachusetts highway commission of the county commissioners of any county, made at the request of any town of not more than twelve thousand inhabitants within said county, there shall be furnished by said highway commission to said

Road machines  
to be furnished  
at the expense  
of the Common-  
wealth for use  
in certain towns,  
etc.Amended by  
1897, 355, § 3.

county, at the expense of the Commonwealth, one or more steam rollers, portable stone crushers and such other road machines as the said highway commission may deem necessary for the construction and maintenance of better roads in the town making such request. Such machines shall remain the property of the Commonwealth and shall be managed and maintained under the direction of the county commissioners. The county commissioners shall engage competent engineers and skilled mechanics to operate said machines, who shall be paid from the county treasury such sums for each day's actual services as the county commissioners may determine. The expenses so incurred shall be repaid to the county by the towns using said machines, as apportioned by the county commissioners, in proportion to the time in which such machines were used by them.

Repeal.

SECTION 2. Chapter four hundred and eighty-six of the acts of the year eighteen hundred and ninety-five is hereby repealed.

SECTION 3. This act shall take effect upon its passage.

*Approved June 6, 1896.*

---

[ACTS OF 1897, CHAPTER 355.]

#### AN ACT RELATIVE TO STATE HIGHWAYS.

*Be it enacted, etc., as follows :*

1894, 497, § 2,  
amended.

SECTION 1. Section two of chapter four hundred and ninety-seven of the acts of the year eighteen hundred and ninety-four is hereby amended by inserting after the word "file", in the fifth line of said section, the words:—a certified copy of,—and by striking out the last sentence of said section and inserting in place thereof the words:—No opening shall be made in any such road, nor any structure placed therein, nor shall there be made any change or removal of structures already placed therein, except with the approval of and in accordance with a permit from said commission, which shall exercise complete and permanent jurisdiction over state highways,—so as to read as follows:—*Section 2.* Said highway commission shall consider such petition and

Highway com-  
missioners to  
receive petitions

determine what the public necessity and convenience require in the premises, and, if they deem that the highway should be laid out or be taken charge of by the Commonwealth, shall file a certified copy of a plan thereof in the office of the county commissioners of the county in which the petitioners reside, with the petition therefor and a certificate that they have laid out and taken charge of said highway in accordance with said plan, and shall file a copy of the plan and location of the portion lying in each city or town in the office of the clerk of said city or town, and said highway shall, after the filing of said plans, be laid out as a highway, and shall be constructed and kept in good repair and condition as a highway by said commission, at the expense of the Commonwealth, and shall be known as a state road, and thereafter be maintained by the Commonwealth under the supervision of said commission. No opening shall be made in any such road, nor any structure placed therein, nor shall there be made any change or removal of structures already placed therein, except with the approval of and in accordance with a permit from said commission, which shall exercise complete and permanent jurisdiction over state highways.

for highways,  
and their duties  
in such cases  
defined.

SECTION 2. Section four of said chapter four hundred and ninety-seven is hereby amended by inserting after the word "thereby", in the thirty-third line, the words: — The commission shall also have power to contract in the manner and under the conditions hereinbefore specified with a city or town, or with private bidders when a city or town shall not elect so to contract, for the grading of a state highway, or for furnishing materials or any other element in the construction of such highway, — so as to read as follows: — *Section 4.* Said commission shall, when about to construct any highway, give to each city and town in which said highway lies a certified copy of the plans and specifications for said highway, with a notice that said commission is ready for the construction of said road. Such city or town shall have the right, without advertisement, to contract with said commission for the construction of so much of such highway as lies within its limits, in accordance with

1894, 497, § 4,  
amended.

Commission to  
furnish plans to  
towns and cities,  
etc.

Cities and towns  
may contract  
with commis-  
sion to construct  
highways.

Commission  
may advertise  
for bids in  
certain cases.

May reject bids.

Not more than  
ten miles of  
road to be con-  
structed in any  
county in any  
one year unless,  
etc.

1896, 513, § 1,  
amended.

the plans and specifications, and under its supervision and subject to its approval, at a price agreed upon between said commission and said city or town. If said city or town shall not elect to so contract within thirty days said commission shall advertise in two or more papers published in the county where the road or portion of it is situated, and in three or more daily papers published in Boston, for bids for the construction of said highway under their supervision and subject to their approval, in accordance with plans and specifications to be furnished by said commission. Such advertisement shall state the time and place for opening the proposals in answer to said advertisements, and reserve the right to reject any and all proposals. All such proposals shall be sealed and shall be kept by the board, and shall be open to public inspection after said proposals have been accepted or rejected. Said commission may reject any or all bids, or if a bid is satisfactory they shall, with the approval of the governor and council, make a contract in writing on behalf of the Commonwealth for said construction, and shall require of the contractor a bond for at least twenty-five per cent. of the contract price to indemnify any city or town in which such highway lies, against damage while such road is being constructed; and the Commonwealth shall not be liable for any damage occasioned thereby. The commission shall also have power to contract in the manner and under the conditions hereinbefore specified with a city or town, or with private bidders when a city or town shall not elect so to contract, for the grading of a state highway, or for furnishing materials or any other element in the construction of such highway. All construction of state roads shall be fairly apportioned by said commission among the different counties, and not more than ten miles of state road shall be constructed in any one county in any one year on petition as aforesaid, without the previous approval thereof in writing by the governor and council.

SECTION 3. Section one of chapter five hundred and thirteen of the acts of the year eighteen hundred and ninety-six is hereby amended by striking out the whole of said section and inserting in place thereof the following:—



*Section 1.* Upon the application to the Massachusetts highway commission of the county commissioners of any county, made at the request of any town of not more than twelve thousand inhabitants within said county, there shall be furnished by said highway commission to said county, at the expense of the Commonwealth, such steam rollers, portable stone crushers, and other road machines as the said highway commission may deem necessary for the construction and maintenance of better roads in the county from which such a request comes. Such machines shall remain the property of the Commonwealth and shall be managed and maintained under the direction of the county commissioners, and they shall at all times be cared for in a manner satisfactory to the highway commission. The county commissioners shall engage competent engineers and skilled mechanics to operate said machines, who shall be paid from the county treasury such sums for each day's actual services as the county commissioners may determine. The expenses so incurred shall be repaid to the county by the Commonwealth or by the towns using said machines, as apportioned by the county commissioners, in proportion to the time during which such machines were used by such towns. Whenever any part of a state highway shall have been constructed in a county where there is road machinery purchased under the provisions of this act the highway commission shall have the right to use said machinery at such times as said road machinery is not in use by any town, for the maintenance and repair of such highway.

Commission may furnish counties, at expense of Commonwealth, steam rollers, crushers, etc.

Such machines to remain property of Commonwealth under care of county commissioners, etc.

Expenses of said machines to be repaid by counties or towns.

Commission has right to use said machines.

SECTION 4. The provisions of section one of chapter five hundred and forty-one of the acts of the year eighteen hundred and ninety-six shall apply to the repair of a state highway as well as to the construction thereof.

1896, 541, § 1, to apply to repair of a state highway.

[Acts of 1896, chapter 541, was repealed by Acts of 1898, chapter 578, section 26.]

SECTION 5. All payments made to the Commonwealth under the provisions of said chapter five hundred and forty-one shall be credited to the fund for the construction of state highways: *provided*, that such a fund exists at the time the payment is made, otherwise they shall be credited to the general fund of the Commonwealth.

Payments to be credited to fund for construction of state highways.

*Approved May 6, 1897.*

## [RESOLVES OF 1897, CHAPTER 95.]

RESOLVE TO PROVIDE FOR ADDITIONAL COPIES OF THE  
REPORT OF THE MASSACHUSETTS HIGHWAY COMMISSION.

Additional  
copies of report  
of Massachu-  
setts highway  
commission

*Resolved*, That . . . beginning with the year eighteen hundred and ninety-eight there shall be printed annually four thousand copies of the report of said commission, and each member of the general court shall be entitled to receive ten copies.

*Approved June 11, 1897.*

## [ACTS OF 1898, CHAPTER 476.]

## AN ACT RELATIVE TO STATE HIGHWAYS.

*Be it enacted, etc., as follows:*

1894, 497, § 1,  
amended.

SECTION 1. Section one of chapter four hundred and ninety-seven of the acts of the year eighteen hundred and ninety-four is hereby amended by striking out all after the word "commission", in the seventh and eighth lines, and inserting in place thereof the words:—requesting that said road may be taken charge of by the Commonwealth,—so as to read as follows:—*Section 1.* Whenever the county commissioners of a county, or the mayor and aldermen of a city, or the selectmen of a town, adjudge that the public necessity and convenience require that the Commonwealth take charge of a new or an existing road as a highway, in whole or in part, in that county, city or town, they may apply by a petition in writing to the Massachusetts highway commission, requesting that said road may be taken charge of by the Commonwealth.

Petition for the  
taking of cer-  
tain roads as  
state highways.

SECTION 2. This act shall take effect upon its passage.

*Approved May 27, 1898.*

## [ACTS OF 1898, CHAPTER 578.]

## AN ACT RELATIVE TO STREET RAILWAYS.

*Be it enacted, etc., as follows:*

SECTION 24. Whenever a street, road, bridge or other public way in which a street railway location has been

Authority of  
state highway  
commission  
over certain  
highways, etc.



previously granted by the local authorities is laid out, taken charge of or constructed by or under authority of the state highway commission, said commission shall thereafter, so long as it has charge thereof, have and exercise with regard to the location and maintenance of street railways therein the same authority, in the same manner and subject to the same provisions, as is conferred by this act upon boards of aldermen and selectmen, such authority to be exercised in the same manner, subject to the same provisions, and subject to the same rights on the part of abutters and street railway companies, as are herein provided with respect to the relocation and maintenance of street railways in public ways not under the jurisdiction or charge of said commission.

. . . . .  
*Approved June 23, 1898.*

---

[ACTS OF 1900, CHAPTER 141.]

AN ACT MAKING APPROPRIATIONS FOR THE MASSACHUSETTS  
HIGHWAY COMMISSION.

*Be it enacted, etc., as follows :*

SECTION 1. The sums hereinafter mentioned are ap- Appropriations.  
propriated, to be paid out of the treasury of the Commonwealth from the ordinary revenue, for the purposes specified, for the year ending on the thirty-first day of December in the year nineteen hundred, to wit: —

For the salaries of the Massachusetts highway commis- Massachusetts  
sion, the sum of six thousand dollars. highway com-  
missioners.

For the salaries of the engineers, clerks and assistants Engineers,  
in the office of the Massachusetts highway commission, a clerks, etc.

For travelling and other expenses of the Massachusetts Expenses.  
highway commission, printing, postage and necessary office expenses, a sum not exceeding five thousand four hundred and forty dollars.

SECTION 2. This act shall take effect upon its passage.

*Approved March 13, 1900.*

[ACTS OF 1900, CHAPTER 253.]

## AN ACT RELATIVE TO INJURIES RECEIVED ON STATE HIGHWAYS.

*Be it enacted, etc., as follows :*

The Commonwealth to be liable for injuries to persons travelling upon state highways, etc.

SECTION 1. The Commonwealth shall be liable for injuries to persons travelling upon state highways, in the same manner and subject to the same limitations, conditions and restrictions as are provided by sections eighteen, nineteen, twenty-one and twenty-two of chapter fifty-two of the Public Statutes and acts in amendment thereof or in addition thereto, except that the notice of injury shall be given to the secretary of the Massachusetts highway commission or to any member thereof. The amount recovered for such injuries shall not exceed one fifth of one per cent of the state valuation last preceding the commencement of the action, of the town or city in which such injury is received, nor shall it exceed four thousand dollars.

Not to be liable in certain cases.

SECTION 2. Nothing herein contained shall render the Commonwealth liable for any injury or damage caused while a state road is being constructed, nor shall the Commonwealth be liable for any injuries except those received upon that part of the way lying between the inside lines of sidewalks, as defined in chapter three hundred and forty-five of the acts of the year eighteen hundred and ninety-six. A city or town may make temporary necessary repairs of a state highway without the approval of said commission.

Temporary repairs of state highway.

Repeal.

SECTION 3. Section six of chapter four hundred and ninety-seven of the acts of the year eighteen hundred and ninety-four is hereby repealed.

*Approved April 25, 1900.*

[ACTS OF 1900, CHAPTER 404.]

## AN ACT RELATIVE TO CONTRACTS BETWEEN CITIES AND TOWNS AND THE MASSACHUSETTS HIGHWAY COMMISSION FOR THE CONSTRUCTION OF STATE HIGHWAYS.

*Be it enacted, etc., as follows.*

1894, 497, § 4, amended.

SECTION 1. Section four of chapter four hundred and ninety-seven of the acts of the year eighteen hundred and ninety-four is hereby amended by striking out the word

“ thirty”, in line thirteen, and inserting in place thereof the word : — ten, — so as to read as follows : — *Section 4.* Construction of highways, notice to cities and towns, bids, proposals, etc. Said commission shall, when about to construct any highway, give to each city and town in which said highway lies a certified copy of the plans and specifications for said highway, with a notice that said commission is ready for the construction of said road. Such city or town shall have the right, without advertisement, to contract with said commission for the construction of so much of such highway as lies within its limits, in accordance with the plans and specifications, and under its supervision and subject to its approval, at a price agreed upon between said commission and said city or town. If said city or town shall not elect to so contract within ten days said commission shall advertise in two or more papers published in the county where the road or portion of it is situated, and in three or more daily papers published in Boston, for bids for the construction of said highway under their supervision and subject to their approval, in accordance with plans and specifications to be furnished by said commission. Such advertisement shall state the time and place for opening the proposals in answer to said advertisements, and reserve the right to reject any and all proposals. All such proposals shall be sealed and shall be kept by the board, and shall be open to public inspection after said proposals have been accepted or rejected. Said commission may reject any or all bids, or if a bid is satisfactory they shall, with the approval of the governor and council, make a contract in writing on behalf of the Commonwealth for said construction, and shall require of the contractor a bond for at least twenty-five per cent of the contract price to indemnify any city or town in which such highway lies, against damage while such road is being constructed; and the Commonwealth shall not be liable for any damage occasioned thereby. Construction to be apportioned among the different counties. All construction of state roads shall be fairly apportioned by said commission among the different counties, and not more than ten miles of state road shall be constructed in any one county in any one year on petition as aforesaid, without the previous approval thereof in writing by the governor and council.

SECTION 2. This act shall take effect upon its passage.

*Approved June 27, 1900.*

[ACTS OF 1900, CHAPTER 432.]

AN ACT RELATIVE TO THE REPAIR OF STATE HIGHWAYS BY OR UNDER THE DIRECTION OF THE MASSACHUSETTS HIGHWAY COMMISSION, AND TO THE CONSTRUCTION OR REPAIR OF HIGHWAYS IN CERTAIN SMALL TOWNS.

*Be it enacted, etc., as follows:*

Payment of expenses for repairs of state highways, etc.

SECTION 1. The Massachusetts highway commission shall, in January of each year, certify to the treasurer and receiver general the amount of the expenditure for repairs of state highways in each city and town during the preceding year; and the said amount up to but not exceeding fifty dollars per mile shall be made a part of the state tax for such cities and towns respectively, and as such, assessed and collected. The said amount shall be credited to the appropriation for state highways to be used again by the Massachusetts highway commission. Such repairs may be made by the city or town concerned, at its election, under the direction of the Massachusetts highway commission, and at prices mutually agreed upon, and in such case the expenditure therefor in excess of fifty dollars per mile shall be repaid to the city or town by the Massachusetts highway commission out of the annual appropriation for state highways.

Construction or repair of highways in towns in which no state highway has been built.

SECTION 2. Of the amount appropriated each year for the construction and repair of state highways five per cent shall be expended under the direction of the Massachusetts highway commission in such towns and in such amounts as it shall determine, in constructing or repairing highways in towns in which no state highway has been built. Such allotments and expenditures shall be made only upon petition of selectmen of towns, and any highway constructed or repaired under the provisions of this section shall remain a town highway and subject to all laws relating thereto: *provided*, that no town shall receive in one year a sum exceeding forty per cent of its average appropriations for highway purposes for the five years next previous.

Proviso.

SECTION 3. This act shall take effect upon its passage.

*Approved July 5, 1900.*

[ACTS OF 1900, CHAPTER 442.]

AN ACT RELATIVE TO THE CONSTRUCTION AND REPAIR OF  
STATE HIGHWAYS BY THE MASSACHUSETTS HIGHWAY COM-  
MISSION.

*Be it enacted, etc., as follows :*

SECTION 1. The Massachusetts highway commission is hereby authorized to expend a sum not exceeding five hundred thousand dollars for the construction and repair of state highways. Of this sum one hundred thousand dollars shall be reserved for expenses incurred after the first day of January in the year nineteen hundred and one.

Construction  
and repair of  
state highways.

SECTION 2. For the purpose of meeting the expenditure hereby authorized the treasurer and receiver general is hereby empowered, with the approval of the governor and council, to issue scrip or certificates of indebtedness to an amount not exceeding five hundred thousand dollars, for a term not exceeding thirty years. Such scrip or certificates of indebtedness shall be issued as registered bonds or with interest coupons attached, and shall bear interest not exceeding four per cent per annum, payable semi-annually. They shall be designated on their face as the State Highway Loan, shall be countersigned by the governor, and shall be deemed a pledge of the faith and credit of the Commonwealth ; and the principal and interest thereof shall be paid at the times specified therein in gold coin of the United States or its equivalent. They shall be sold at public auction, or disposed of in such other manner, at such times and prices, in such amounts and at such rates of interest, not exceeding the rate above specified, as shall be deemed best. The sinking fund established by chapter four hundred and ninety-seven of the acts of the year eighteen hundred and ninety-four shall also be maintained for the purpose of providing for the payment of the bonds issued under authority of this act, and the treasurer and receiver general shall apportion thereto from year to year an amount sufficient with the accumulations of said fund to extinguish at maturity the debt incurred by the issue of said bonds. The amount necessary to meet the annual sinking fund requirements

State highway  
loan.

Sinking fund.



and to pay the interest on said bonds shall be raised by taxation from year to year.

SECTION 3. This act shall take effect upon its passage.

*Approved July 10, 1900.*

---

[ACTS OF 1900, CHAPTER 474.]

AN ACT RELATIVE TO THE MASSACHUSETTS HIGHWAY COMMISSION.

*Be it enacted, etc., as follows :*

Massachusetts  
highway com-  
mission, ap-  
pointment,  
terms, etc.

SECTION 1. The governor with the advice and consent of the council shall, on or before the first day of January in the year nineteen hundred and one, appoint three competent persons, one to be designated as chairman, to serve as the Massachusetts Highway Commission. Their terms of office shall be so arranged and designated at the time of their appointment that the term of one member shall expire in three years, one in two years and one in one year. The full term of office thereafter shall be for three years, and all vacancies occurring shall be filled by the governor, with the advice and consent of the council. The members of said board may be removed by the governor, with the advice and consent of the council, for such cause as he shall deem sufficient and shall express in the order of removal. The chairman shall receive an annual salary of thirty-five hundred dollars, and each of the other members shall receive an annual salary of twenty-five hundred dollars, in full compensation for their services, payable in equal monthly instalments. They shall be allowed their travelling expenses, and shall devote their time to the business of the commission. They may expend annually for clerk hire, engineers and for defraying the expenses incidental to and necessary for the performance of their duties such sum as the legislature shall appropriate. They shall be provided with an office in the state house, or in some other suitable place in the city of Boston, in which the records of their office shall be kept. They may establish rules and regulations for the conduct of business and for carrying out the provisions of this act.

Compensation,  
etc.

Engineers,  
clerks, etc.

1893, 476, § 1,  
repealed, etc.

SECTION 2. Section one of chapter four hundred and seventy-six of the acts of the year eighteen hundred and



ninety-three is hereby repealed and the term of office of the members of the Massachusetts highway commission appointed under said section shall terminate upon the appointment of their successors, in accordance with the provisions of this act.

SECTION 3. So much of section one of this act as authorizes the appointment of the members of said Massachusetts highway commission shall take effect upon its passage; and the remainder of this act shall take effect on the first day of January in the year nineteen hundred and one.

When to take effect.

*Approved July 17, 1900.*

---

[ACTS OF 1900, CHAPTER 475.]

AN ACT TO AUTHORIZE THE MASSACHUSETTS HIGHWAY COMMISSION TO ALTER LOCATIONS.

*Be it enacted, etc., as follows:*

SECTION 1. The Massachusetts highway commission, with the concurrence of the mayor and board of aldermen of a city or of the selectmen of a town, may alter any location made by it for a state highway in any city or town, by filing a plan thereof in the office of the county commissioners, together with a certificate that said commission has laid out and taken charge of said highway as changed or altered in accordance with said plan, and by filing a copy of the plan or location as changed, in the office of the clerk of said city or town as required by law in the filing of original locations. Any damages sustained by any person whose property is taken for or injured by the construction of any such highway shall be recovered in the same manner as provided by law for the recovery of damages upon an original taking by said commission.

Massachusetts highway commission may alter locations for state highways, etc.

Damages.

SECTION 2. Said commission, with such concurrence, may by deed executed, acknowledged and recorded according to the laws of the Commonwealth, accompanied by a plan of survey also to be recorded with such deed, abandon any portion of the land or rights in land in any city or town taken or acquired by it, and said abandonment shall revert the title thereof as if never taken, in the persons, their heirs and assigns, in whom it was vested at the time of the taking. The said abandonment may be

Certain land, etc., may be abandoned.

pleaded in reduction of damages in any suit therefor on account of such taking.

SECTION 3. This act shall take effect upon its passage.

*Approved July 17, 1900.*

---

APPROPRIATIONS FOR THE CONSTRUCTION AND REPAIR OF  
STATE HIGHWAYS.

1894, chapter 497, section 8,	. . . .	\$300,000 00
1895, chapter 347, section 3,	. . . .	400,000 00
1896, chapter 481, section 3,	. . . .	600,000 00
1897, chapter 340, section 1,	. . . .	800,000 00
1898, chapter 539, section 1,	. . . .	400,000 00
1899, chapter 396, section 1,	. . . .	500,000 00
1900, chapter 442, section 1,	. . . .	500,000 00
Total, . . . . .	. . . . .	<u>\$3,500,000 00</u>

APPROPRIATIONS FOR THE SALARIES AND EXPENSES OF  
THE COMMISSION, PAID FROM THE TREASURY OF THE  
COMMONWEALTH.

1898, <sup>1</sup> chapter 579, section 1,	. . . .	<sup>2</sup> \$14,300 00
1899, chapter 367, section 1,	. . . .	28,500 00
1900, chapter 141, section 1,	. . . .	28,500 00

<sup>1</sup> Previous to 1898 the salaries and expenses of the Commission were paid out of the State highway loan fund.

<sup>2</sup> This appropriation bill was approved June 23, 1898, and the amount named was for the remainder of the year.

## APPENDIX G.

## COST PER STANDARD MILE OF ROAD (SECTIONS LAID OUT AND CONSTRUCTED DURING 1900).

TOWN OR CITY.	Square Yards.	Miles.	Standard Miles.	Cost per Standard Mile.
Acton, 1899, . . . . .	18,775	2.01	2.01	\$7,181 33
Acton, 1900, . . . . .	5,833	.69	.69	5,581 32
Andover, . . . . .	6,000	.68	.68	6,401 40
Amesbury, . . . . .	3,333	.38	.38	14,222 47
Attleborough, <sup>1</sup> . . . . .	8,828	1.00	1.00	2,354 33
Brockton, . . . . .	7,366	.85	.85	9,006 67
Brookfield, . . . . .	4,477	.51	.51	8,600 33
Buckland, <sup>2</sup> . . . . .	4,000	.61	.49	9,076 49
Cheshire, 1899, . . . . .	8,316	.95	.95	10,419 46
Cheshire, 1900, . . . . .	4,182	.48	.48	9,936 41
Chester, . . . . .	2,828	.32	.32	10,429 22
Dartmouth, <sup>3</sup> . . . . .	9,300	.92	1.12	5,936 89
Dennis (1), 1900, . . . . .	6,357	.72	.72	7,818 11
Dennis (2), 1900, . . . . .	2,447	.28	.28	6,419 68
Edgartown, . . . . .	4,516	.46	.46	8,497 13
Erving, <sup>1</sup> . . . . .	3,520	.40	.40	11,794 30
Fitchburg, . . . . .	5,083	.58	.58	7,368 95
Gardner, <sup>4</sup> . . . . .	6,333	.72	.72	11,417 15
Grafton, . . . . .	2,504	.29	.29	7,997 86
Hadley, . . . . .	4,307	.49	.49	10,983 75
Hamilton, 1899, . . . . .	5,816	.66	.66	7,174 76
Hamilton, 1900, . . . . .	6,900	.78	.78	7,215 87
Harwich, . . . . .	8,980	1.04	1.04	5,531 98
Holden, . . . . .	5,250	.60	.60	8,564 92
Leicester, . . . . .	5,988	.68	.68	11,577 10
Lenox, . . . . .	7,884	.89	.89	12,842 33
Lunenburg, . . . . .	3,573	.40	.40	8,991 05
Marlborough, 1899, . . . . .	5,600	.64	.64	19,920 30
Marlborough, 1900, . . . . .	2,945	.32	.32	9,136 54
Mattapoisett, . . . . .	7,200	.81	.81	5,827 52
Methuen, . . . . .	5,355	.63	.63	7,081 89
Milton, <sup>5</sup> . . . . .	6,933	.49	.79	13,013 54
Newbury, . . . . .	4,742	.52	.52	8,052 40
Northampton, . . . . .	4,536	.71	.71	11,137 54
North Andover, . . . . .	7,000	.79	.79	7,551 39
Norwood, . . . . .	4,188	.50	.50	8,833 74
Orleans, . . . . .	7,250	.82	.82	4,153 35

<sup>1</sup> Gravel road.<sup>2</sup> Macadam, 12 feet in width.<sup>3</sup> Macadam, 18 feet in width.<sup>4</sup> Cost of macadam in 1900, plus previous cost of grading.<sup>5</sup> Macadam, 24 feet in width.

COST PER STANDARD MILE OF ROAD, ETC. — *Concluded.*

TOWN OR CITY.	Square Yards.	Miles.	Standard Miles.	Cost per Standard Mile.
Palmer, . . . . .	7,417	.84	.84	\$7,923 93
Quincy, <sup>1</sup> . . . . .	9,089	.49	1.09	7,328 01
Reading, . . . . .	7,500	.85	.85	6,831 02
Saugus-Revere, <sup>2,3</sup> . . . . .	29,008	2.27	3.63	8,452 89
Scituate, . . . . .	5,315	.60	.60	8,333 63
Shrewsbury, . . . . .	4,407	.44	.44	10,808 50
Somerset, <sup>4</sup> . . . . .	8,902	.84	1.01	7,634 87
South Hadley, . . . . .	2,299	.26	.26	20,693 30
Spencer, . . . . .	3,791	.43	.43	15,489 44
Taunton, . . . . .	4,355	.60	.60	7,754 45
Tewksbury, . . . . .	5,000	.57	.57	9,068 93
Townsend, . . . . .	3,735	.52	.52	9,754 81
Warren, 1899, . . . . .	5,000	.57	.57	7,992 03
Warren, 1900, . . . . .	3,217	.37	.37	12,054 30
Walpole, . . . . .	7,786	.87	.87	7,402 84
Ware and West Brookfield, . . . . .	4,233	.49	.49	10,243 33
Wayland, . . . . .	10,250	1.16	1.16	6,073 59
West Brookfield, . . . . .	3,333	.38	.38	13,998 71
Westfield, . . . . .	5,416	.62	.62	7,437 34
Westwood, . . . . .	9,225	1.05	1.05	7,520 94
Whately, <sup>5</sup> . . . . .	5,496	.78	.63	8,275 94
Winchester, . . . . .	10,873	1.20	1.20	5,446 67
Woburn, . . . . .	8,166	.93	.93	5,138 03
Wrentham, 1899, . . . . .	4,927	.56	.56	7,042 93
Wrentham (1), 1900, . . . . .	2,575	.29	.29	8,006 65
Wrentham (2), 1900, . . . . .	7,167	.81	.81	5,828 88
Total, . . . . .	396,868	43.41	45.77	<sup>6</sup> \$8,897 40
Gravel, . . . . .	12,348	1.40	1.40	<sup>6</sup> 7,074 21
Macadam, . . . . .	384,520	42.01	44.37	<sup>6</sup> 8,957 17

<sup>1</sup> Macadam, 33 feet in width.<sup>2</sup> Does not include cost of bridges.<sup>3</sup> Macadam, 24 feet in width.<sup>4</sup> Macadam, 18 feet in width.<sup>5</sup> Macadam, 12 feet in width.<sup>6</sup> Average.

## APPENDIX H.

## MAINTENANCE.

*Table showing the Amounts expended for Repairs and Maintenance and the Cost per Mile per Year on Each Road finished previous to 1901; also the Number of Miles of Road under Maintenance and the Amounts to be assessed upon Municipalities for Maintenance under Chapter 432 of the Acts of 1900.*

TOWN OR CITY.	Expended to 1900.	Expended in 1900.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1900.	Length under Maintenance (Miles).	Amount to be assessed on Towns or Cities.
Acton, . . . .	-	\$23 95	\$23 95	\$34 21	\$11 40	2.10	\$23 95
Acushnet, . . .	\$570 04	21 66	591 70	328 72	36 10	.60	21 66
Adams, . . . .	94 01	133 66	227 67	159 21	234 49	.57	28 50
Amesbury, . . .	-	54 11	54 11	208 11	106 10	.51	25 50
Andover, . . . .	233 80	335 06	568 86	77 08	140 17	2.38	119 00
Ashby, . . . .	1,580 28	255 23	1,835 51	148 38	71 69	3.57	178 50
Ashfield, . . . .	143 05	260 29	403 34	120 76	159 69	1.61	81 50
Athol, . . . .	4,088 35	166 45	4,254 80	660 68	103 38	1.61	80 50
Auburn, . . . .	457 05	336 18	793 23	89 33	109 50	3.07	153 50
Barnstable, . . .	137 03	145 83	302 86	94 64	153 50	1.79	89 50
Barre, . . . .	31 51	25 20	56 71	21 32	19 84	1.27	25 20
Bedford, . . . .	24 20	10 05	34 25	24 46	18 54	.54	10 05
Beverly, . . . .	522 15	210 50	732 65	102 90	104 73	2.01	100 50
Blackstone, . . .	-	87 06	87 06	136 03	136 03	.64	32 00
Bourne, . . . .	142 38	61 12	203 50	71 40	43 03	1.42	61 12
Boxborough, . . .	19 34	105 49	124 83	44 27	77 56	1.36	68 00
Brewster, . . . .	857 90	201 40	1,059 30	115 52	82 20	2.44	122 00
Brimfield, . . . .	32 96	292 25	325 21	87 65	124 89	2.34	117 00
Brockton, . . . .	39 63	221 95	261 58	87 78	119 34	1.84	93 00
Brookfield, . . . .	16 96	188 16	205 12	107 95	213 82	.88	44 00
Buckland, . . . .	315 94	281 17	597 11	64 83	97 33	2.89	144 50



*Table showing the Amounts expended for Repairs, etc. — Continued.*

TOWN OR CITY.	Expended to 1900.	Expended in 1900.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1900.	Length under Maintenance (Miles).	Amount to be assessed on Towns or Cities.
Charlemont, . . . .	\$110 70	\$243 96	\$354 66	\$227 35	\$262 32	.77	\$38 50
Chatham, . . . .	6 62	128 43	135 05	173 13	217 63	.59	29 50
Chelmsford, . . . .	17 21	193 96	211 17	150 84	208 56	.93	46 50
Cheshire, . . . .	-	4 70	4 70	10 22	4 95	.95	4 70
Chester, . . . .	-	128 79	128 79	321 97	378 53	.34	17 00
Chicopee, . . . .	204 45	641 21	845 66	356 15	689 47	.93	46 50
Cohasset, . . . .	80 26	29 62	109 88	70 43	32 91	.90	29 62
Colrain, . . . .	55 93	102 58	158 51	110 08	94 98	1.08	54 00
Concord, . . . .	141 75	55 00	196 75	53 18	37 67	1.46	55 00
Cottage City, . . . .	1,777 27	913 98	2,691 25	246 23	385 64	2.37	118 50
Dalton, . . . .	1,232 60	828 94	2,061 54	330 38	531 37	1.56	78 00
Dartmouth, . . . .	197 10	16 00	213 10	163 92	12 31	1.30	16 00
Deerfield, . . . .	806 43	257 28	1,063 71	162 40	168 04	1.53	76 50
Dennis, . . . .	1,092 08	253 16	1,345 24	102 14	59 43	4.26	213 00
Duxbury, . . . .	416 31	82 18	498 49	70 80	40 09	2.05	82 18
Easthampton, . . . .	411 56	63 02	474 58	78 31	47 74	1.32	63 02
Edgartown, . . . .	112 99	13 86	126 85	120 81	27 72	.46	13 86
Erving, . . . .	-	62 67	62 67	41 23	51 36	1.22	61 00
Fairhaven, . . . .	182 10	70 40	252 50	33 67	48 55	1.45	70 40
Fitchburg, . . . .	323 40	128 43	451 83	71 38	81 28	1.58	79 00
Gardner, . . . .	306 76	263 42	570 18	102 92	111 15	2.37	118 50
Gloucester, . . . .	587 88	238 72	826 60	94 25	96 26	2.48	124 00
Goshen, . . . .	1,374 02	165 14	1,539 16	167 29	86 46	1.91	95 50
Grafton, . . . .	69 99	78 90	148 89	60 52	99 87	.79	39 50
Granby, . . . .	477 42	126 42	603 84	182 43	200 67	.63	31 50
Great Barrington, . . . .	996 92	1,734 81	2,731 73	258 44	621 80	2.79	139 50
Greenfield, . . . .	-	2 92	2 92	4 95	4 95	.59	2 92
Hadley, . . . .	1,913 78	232 08	2,145 86	252 75	103 61	2.24	112 00
Hamilton, . . . .	-	3 28	3 28	6 31	2 28	1.44	3 28
Hancock, . . . .	1,393 32	1,032 84	2,426 16	301 01	461 06	2.24	112 00
Hardwick, . . . .	77 50	25 42	102 92	109 49	65 18	.39	19 50
Harwich, . . . .	-	126 35	126 35	119 20	74 32	1.70	85 00
Haverhill, . . . .	-	2 00	2 00	1 05	96	2.08	2 00
Hingham, . . . .	452 53	204 28	656 81	58 33	77 08	2.66	133 00

*Table showing the Amounts expended for Repairs, etc. — Continued.*

TOWN OR CITY.	Expended to 1900.	Expended in 1900.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1900.	Length under Maintenance (Miles).	Amount to be assessed on Towns or Cities.
Holbrook, . . .	\$173 51	\$56 07	\$297 01	\$64 99	\$50 51	1.11	\$55 50
Holbrook (Weymouth), .	67 43						
Holden, . . .	666 77	102 53	769 30	59 09	32 45	3.16	102 53
Huntington, . . .	476 67	677 07	1,153 74	294 32	670 36	1.01	50 50
Lawrence, . . .	24 05	62 84	86 89	96 54	232 74	.27	13 50
Lee, . . .	1,177 73	91 22	1,268 95	132 73	46 07	1.98	91 22
Leicester, . . .	4,146 61	4,713 90	8,860 51	660 25	1,125 04	4.19	209 50
Lenox, . . .	-	163 29	163 29	-	-	.89	44 50
Lexington, . . .	338 02	186 11	524 13	47 35	53 94	3.45	172 50
Lincoln, . . .	237 73	151 67	389 40	49 29	73 27	2.07	103 50
Lowell (North), . .	192 62	32 75	225 37	75 37	33 76	2.30	115 00
Lowell (South), . .	105 62	226 87	332 49	102 29	168 95		
Lunenburg, . . .	13 94	83 48	97 42	62 05	80 27	1.04	52 00
Marion, . . .	264 63	98 03	362 66	37 46	34 27	2.86	98 03
Marlborough, . . .	93 74	81 65	175 39	66 18	71 62	1.14	57 00
Marshfield, . . .	244 23	32 77	277 00	49 07	16 39	2.00	32 77
Mattapoisett, . . .	179 28	128 38	307 66	51 11	109 72	1.17	58 50
Merrimac, . . .	28 54	79 00	107 54	50 25	85 65	.92	46 00
Methuen, . . .	121 86	127 50	249 36	77 68	122 59	1.04	52 00
Middleborough, . .	401 19	83 35	484 54	44 09	30 18	2.76	83 35
Milton, . . .	-	21 11	21 11	105 55	43 08	.49	21 11
Monson, . . .	506 98	33 42	540 40	116 22	35 93	.93	33 42
Montague, . . .	179 49	65 28	244 77	96 36	40 05	1.63	65 28
Nantucket, . . .	1,512 74	174 18	1,686 92	93 82	38 88	4.48	174 18
New Braintree, . .	-	10 89	10 89	26 56	64 06	.17	8 50
Newbury, . . .	-	2 60	2 60	11 82	5 00	.52	2 60
Newburyport, . . .	255 01	229 43	484 44	123 58	131 10	1.75	87 50
Norfolk, . . .	252 09	40 80	292 89	50 50	28 14	1.45	40 80
North Adams, . . .	602 04	776 08	1,378 12	184 24	459 17	1.69	84 50
Northampton, . . .	268 10	210 93	479 03	98 16	96 76	1.68	84 00
North Attleborough, .	305 28	177 16	482 44	35 29	49 35	3.60	177 16
Northborough, . .	45 26	63 58	108 84	31 64	35 72	1.78	63 58
North Reading, . .	62 50	5 01	67 51	33 58	4 96	1.01	5 01
Norwood, . . .	261 32	137 13	398 45	62 95	66 89	2.05	102 50

*Table showing the Amounts expended for Repairs, etc. — Continued.*

TOWN OR CITY.	Expended to 1900.	Expended in 1900.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1900.	Length under Maintenance (Miles).	Amount to be assessed on Towns or Cities.
Orange, . . . . .	\$964 14	\$240 64	\$1,204 78	\$148 01	\$109 88	2.19	\$109 50
Palmer, . . . . .	-	5 25	5 25	5 99	7 00	.75	5 25
Paxton, . . . . .	1,111 25	419 37	1,530 62	111 56	129 41	3.24	162 00
Phillipston, . . . . .	161 30	83 33	244 63	111 19	70 02	1.19	59 50
Pittsfield (East), . . . . .	111 11	930 56	1,822 51	203 41	404 59	2.31	115 50
Pittsfield (West), . . . . .	780 84						
Plymouth, . . . . .	1,440 44	557 22	1,997 66	140 68	144 73	3.85	192 50
Princeton, . . . . .	21 72	152 03	173 75	115 07	310 26	.49	24 50
Quincy, . . . . .	-	2 46	2 46	15 37	5 02	.49	2 46
Reading, . . . . .	-	26 12	26 12	60 74	30 73	.85	26 12
Rehoboth, . . . . .	399 95	64 48	464 43	74 91	34 12	1.89	64 48
Revere (East), . . . . .	202 94	72 56	275 50	215 24	125 10	.58	29 00
Revere (West), . . . . .	-	229 82	229 82	675 94	343 01	.67	33 50
Richmond, . . . . .	95 75	116 37	212 12	90 26	83 99	1.36	68 00
Russell, . . . . .	1,764 88	1,190 39	2,955 27	148 43	178 72	6.66	333 00
Sandwich, . . . . .	757 90	90 40	848 30	192 36	49 40	1.83	90 40
Saugus, . . . . .	-	278 26	278 26	347 82	173 91	1.60	80 00
Scituate, . . . . .	379 89	78 41	458 30	105 36	67 02	1.17	58 50
Shelburne, . . . . .	710 27	201 40	911 67	98 99	93 24	2.16	108 00
Shrewsbury, . . . . .	432 22	122 45	554 67	53 64	35 39	3.46	122 45
Somerset, . . . . .	352 25	64 61	416 86	48 14	23 50	2.75	64 61
South Hadley, . . . . .	625 73	540 65	1,166 38	240 49	250 30	2.16	108 00
Sterling, . . . . .	34 57	187 38	221 95	81 90	145 26	1.29	64 50
Stoneham, . . . . .	230 51	54 46	284 97	180 32	95 54	.57	28 50
Sturbridge, . . . . .	70 53	9 06	79 59	55 66	15 36	.59	9 06
Sudbury, . . . . .	30 72	77 15	107 87	60 60	80 36	.96	48 00
Sunderland, . . . . .	6 93	13 60	20 53	46 66	80 00	.17	8 50
Sutton, . . . . .	-	2 44	2 44	4 97	4 97	.49	2 44
Swampscott, . . . . .	206 69	204 73	411 42	184 49	198 76	1.03	51 50
Taunton, . . . . .	835 12	35 32	870 44	136 00	16 50	2.13	35 32
Templeton, . . . . .	3 85	71 85	75 70	97 05	115 88	.63	31 50
Tewksbury, . . . . .	-	2 82	2 82	20 14	4 95	.57	2 82
Tisbury, . . . . .	668 13	165 02	833 15	80 97	85 50	1.93	96 50
Townsend, . . . . .	55 41	215 70	271 11	56 84	116 59	1.86	93 00

*Table showing the Amounts expended for Repairs, etc. — Concluded.*

TOWN OR CITY.	Expended to 1900.	Expended in 1900.	Total.	Total Cost per Mile per Year.	Expended per Mile in 1900.	Length under Maintenance (Miles).	Amount to be assessed on Towns or Cities.
Truro, . . . .	\$150 25	\$157 49	\$307 74	\$68 70	\$123 04	1.28	\$64 00
Tyngsborough, . .	602 78	320 26	923 04	91 57	108 56	2.95	147 50
Uxbridge, . . . .	47 46	79 82	127 28	54 86	62 36	1.28	64 00
Walpole, . . . .	646 59	224 53	871 12	70 30	61 18	3.67	183 50
Ware, . . . .	47 50	159 82	207 32	133 75	109 47	1.46	73 00
Wareham, . . . .	154 45	54 94	209 39	42 65	33 91	1.62	54 94
Warren, . . . .	314 71	250 18	564 89	98 60	132 37	1.89	94 50
Watertown, . . . .	513 51	239 57	753 08	212 73	281 85	.85	42 50
Wayland, . . . .	22 70	35 51	58 21	32 88	58 21	.61	30 50
Wenham, . . . .	98 42	57 02	155 44	84 94	93 47	.61	30 50
Westborough, . . .	47 43	85 50	132 93	73 44	122 14	.70	35 00
West Boylston, . .	48 75	536 72	585 47	182 96	346 27	1.55	77 50
West Brookfield, . .	-	4 80	4 80	7 50	4 95	.97	4 80
Westfield, . . . .	1,382 92	686 44	2,069 36	165 02	197 81	3.47	173 50
Westminster, . . .	450 33	420 56	870 89	92 85	140 19	3.00	150 00
West Newbury, . . .	1,260 41	368 96	1,629 37	200 91	166 20	2.22	111 00
Weston, . . . .	97 75	85 11	182 86	58 05	27 02	3.15	85 11
Westport, . . . .	1,598 50	133 55	1,732 05	108 93	31 42	4.25	133 55
West Springfield, . .	465 51	199 59	665 10	141 51	173 55	1.15	57 50
West Tisbury, . . .	364 91	128 07	492 98	49 39	45 09	2.84	128 07
Westwood, . . . .	-	73 14	73 14	208 97	69 66	1.05	52 50
Weymouth, . . . .	519 15	129 52	648 67	99 49	64 76	2.00	100 00
Whately, . . . .	-	3 87	3 87	14 90	4 97	.78	3 87
Whitman, . . . .	199 73	126 09	325 82	41 14	74 61	1.69	84 50
Wilbraham, . . . .	672 50	56 72	729 22	99 48	29 54	1.92	56 72
Williamsburg, . . .	248 38	115 73	364 11	110 00	101 52	1.14	57 00
Williamstown, . . .	361 84	235 85	597 69	101 99	122 84	1.92	96 00
Winchester, . . . .	-	94 33	94 33	88 99	124 12	.76	38 00
Windsor, . . . .	16 49	1 42	17 91	29 36	5 07	.28	1 42
Worcester, . . . .	535 33	310 08	845 41	135 05	154 27	2.01	100 50
Wrentham, . . . .	578 86	67 03	645 89	54 37	22 05	3.04	67 03
Yarmouth (North), . .	711 74	197 73	909 47	57 89	53 29	3.71	185 50
Yarmouth (South), . .	1,229 17	417 95	1,647 12	92 28	82 11	5.08	254 50
Totals, . . . .	\$63,193 55	\$33,561 81	\$96,755 36	-	-	-	\$11,385 92

## APPENDIX J.

STATEMENT SHOWING ALL PETITIONS RECEIVED,  
WITH LENGTHS OF WAY PETITIONED FOR AND  
LAY-OUTS MADE, TOGETHER WITH SUMMARY BY  
COUNTIES.*Barnstable County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Barnstable, <sup>1,2</sup> . . .	125	July 31, 1895,	10,548	2.00	-	-	-	-
Barnstable, <sup>2,3</sup> . . .	231	Feb. 13, 1896,	7,700	1.46	4,452	.84	-	-
Barnstable, <sup>1,4</sup> . . .	418	Apr. 23, 1898,	10,560	2.00	5,000	.95	-	-
Bourne, <sup>5</sup> . . . . .	124	Jan. 29, 1895,	16,125	3.05	-	-	-	-
Bourne, <sup>6</sup> . . . . .	338	May 1, 1897,	7,470	1.42	7,470	1.42	-	-
Bourne, <sup>7</sup> . . . . .	445	Dec. 19, 1898,	27,000	5.11	-	-	-	-
Brewster, . . . . .	118	Jan. 15, 1895,	40,982	7.76	13,117	2.49	-	-
Chatham, . . . . .	155	Apr. 4, 1895,	10,639	2.01	3,114	.59	-	-
Dennis, <sup>1</sup> . . . . .	102	Nov. 27, 1894,	22,514	4.27	22,511	4.27	-	-
Dennis, <sup>8</sup> . . . . .	126	Feb. 6, 1895,	17,224	3.26	-	-	5,282	1.00
Eastham, . . . . .	209	Aug. 5, 1895,	34,144	6.47	-	-	-	-
Harwich, . . . . .	106	Dec. 22, 1894,	26,150	4.95	4,700	.89	6,650	1.26
Orleans, <sup>1</sup> . . . . .	182	May 27, 1895,	10,440	1.98	-	-	4,348	.82
Orleans, <sup>8</sup> . . . . .	479	Dec. 14, 1899,	13,725	2.60	-	-	-	-
Provincetown, <sup>1</sup> . . .	186	June 4, 1895,	14,790	2.80	-	-	-	-
Provincetown, <sup>1</sup> . . .	504	Nov. 9, 1900,	1,200	.23	-	-	-	-
Sandwich, <sup>1</sup> . . . . .	98	Nov. 23, 1894,	9,000	1.70	9,000	1.70	-	-
Sandwich, <sup>1</sup> . . . . .	430	July 15, 1895,	6,382	1.21	676	.13	3,824	.73
Truro, <sup>9</sup> . . . . .	95	Oct. 22, 1894,	12,478	2.36	12,478	2.36	-	-
Truro, <sup>10</sup> . . . . .	386	Dec. 1, 1897,	20,300	3.84	-	-	-	-
Wellfleet, . . . . .	229	Jan. 30, 1896,	10,203	1.93	-	-	-	-
Wellfleet, . . . . .	483	Feb. 19, 1900,	35,640	6.75	-	-	-	-
Yarmouth, <sup>1</sup> . . . . .	90	Sept. 28, 1894,	19,634	3.72	19,585	3.71	-	-
Yarmouth, <sup>3</sup> . . . . .	100	Nov. 26, 1894,	26,900	5.10	26,825	5.08	-	-
Totals, . . . . .			411,748	77.98	128,928	24.42	20,104	3.81

Twenty-four petitions, in thirteen towns.

Average distance petitioned for, 17,156 feet (3.25 miles).

Thirty-eight lay-outs, in ten towns; all on town petitions.

Distance laid out, 149,032 feet (28.23 miles); average, 3,922 feet (.75 mile).

Percentage of length laid out to length petitioned for, 36.20.

<sup>1</sup> North county road.<sup>2</sup> From Yarmouth line.<sup>3</sup> South county road.<sup>4</sup> From Sandwich line.<sup>5</sup> Plymouth line to Sandwich line.<sup>6</sup> Bourne Village to Wareham line.<sup>7</sup> Bourne Village to Sandwich line.<sup>8</sup> Chatham road.<sup>9</sup> Wellfleet line to Kelly's Corner.<sup>10</sup> North Truro to Kelly's Corner.



*Berkshire County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Adams, <sup>1,2</sup> . . . .	48	July 18, 1894,	9,020	1.71	-	-	-	-
Adams, <sup>3</sup> . . . .	279	July 30, 1896,	5,280	1.00	3,000	.57	-	-
Adams, <sup>4</sup> . . . .	376	Oct. 16, 1897,	12,628	2.39	-	-	-	-
Becket, <sup>5,21</sup> . . . .	117	Jan. 12, 1895,	-	-	-	-	-	-
Becket, <sup>5</sup> . . . .	440	Dec. 16, 1898,	53,430	10.12	-	-	-	-
Berkshire County, <sup>6</sup> . . . .	46	July 18, 1894,	-	-	-	-	-	-
Berkshire County, <sup>7</sup> . . . .	47	July 18, 1894,	-	-	-	-	-	-
Berkshire County, <sup>8</sup> . . . .	82	Aug. 13, 1894,	-	-	-	-	-	-
Berkshire County, <sup>9</sup> . . . .	83	Aug. 13, 1894,	-	-	-	-	-	-
Berkshire County, <sup>10</sup> . . . .	170	May 10, 1895,	-	-	-	-	-	-
Berkshire County, <sup>9</sup> . . . .	187	June 6, 1895,	-	-	-	-	-	-
Berkshire County, <sup>11</sup> . . . .	275	July 25, 1896,	-	-	-	-	-	-
Berkshire County, <sup>12</sup> . . . .	276	July 25, 1896,	-	-	-	-	-	-
Berkshire County, <sup>13</sup> . . . .	277	July 25, 1896,	-	-	-	-	-	-
Berkshire County, <sup>14</sup> . . . .	278	July 25, 1896,	-	-	-	-	-	-
Berkshire County, <sup>10</sup> . . . .	293	Sept. 21, 1896,	-	-	-	-	-	-
Berkshire County, <sup>10</sup> . . . .	330	Mar. 9, 1897,	-	-	-	-	-	-
Berkshire County, <sup>15</sup> . . . .	415	April 7, 1898,	-	-	-	-	-	-
Berkshire County, <sup>16</sup> . . . .	434	Oct. 5, 1898,	-	-	-	-	-	-
Berkshire County, <sup>17</sup> . . . .	435	Oct. 5, 1898,	-	-	-	-	-	-
Berkshire County, <sup>18</sup> . . . .	462	Apr. 17, 1899,	-	-	-	-	-	-
Cheshire, <sup>2,19</sup> . . . .	46	-	3,280	.62	-	-	-	-
Cheshire, <sup>20,21</sup> . . . .	331	Mar. 11, 1897,	-	-	4,991	.95	2,509	.48
Cheshire, <sup>20</sup> . . . .	410	Dec. 16, 1899,	34,300	6.50	-	-	-	-
Clarksburg, . . . .	431	July 26, 1898,	5,280	1.00	-	-	-	-
Dalton, <sup>22</sup> . . . .	26	June 10, 1894,	-	-	-	-	-	-
Dalton, <sup>22</sup> . . . .	176	May 14, 1895,	6,314	1.20	5,459	1.03	-	-
Dalton, <sup>22</sup> . . . .	238	Apr. 1, 1896,	5,190	.98	2,800	.53	-	-
Dalton, <sup>22</sup> . . . .	313	Jan. 29, 1897,	3,200	.63	-	-	-	-
Dalton, <sup>5</sup> . . . .	340	May 18, 1897,	5,450	1.04	-	-	-	-
Florida, . . . .	74	Aug. 1, 1894,	26,853	5.09	-	-	-	-
Great Barrington, <sup>23,19</sup> . . . .	82	-	10,560	2.00	10,560	2.00	-	-
Great Barrington, <sup>23</sup> . . . .	267	June 18, 1896,	10,284	1.95	4,146	.79	-	-
Hancock, <sup>19</sup> . . . .	170	-	6,289	1.19	6,200	1.18	-	-
Hancock, <sup>19</sup> . . . .	293	-	9,938	1.88	8,242	1.56	-	-
Hancock, <sup>19</sup> . . . .	330	-	2,574	.49	2,574	.49	-	-
Hinsdale, . . . .	156	Apr. 6, 1895,	5,624	1.07	-	-	-	-
Lanesborough, <sup>19</sup> . . . .	278	-	5,280	1.00	-	-	-	-
Lee, <sup>5,19</sup> . . . .	83	-	5,280	1.00	5,188	.98	-	-

<sup>1</sup> Duplicate of county petition.<sup>2</sup> Cheshire-Savoy road.<sup>3</sup> Maple Grove road.<sup>4</sup> North Adams road.<sup>5</sup> Pittsfield-Springfield road.<sup>6</sup> See Adams.<sup>7</sup> See North Adams.<sup>8</sup> See Great Barrington.<sup>9</sup> See Lee.<sup>10</sup> See Hancock.<sup>11</sup> See Otis.<sup>12</sup> See Savoy.<sup>13</sup> See Cheshire.<sup>14</sup> See Lanesborough.<sup>15</sup> See West Stockbridge.<sup>16</sup> See Richmond.<sup>17</sup> See Tyringham.<sup>18</sup> See Williamstown.<sup>19</sup> On county petition.<sup>20</sup> Pittsfield-North Adams road.<sup>21</sup> Covered by subsequent petition.<sup>22</sup> Pittsfield-Northampton road.<sup>23</sup> Monterey road.

*Berkshire County — Concluded.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Lee, <sup>1,2</sup> . . . .	187	- -	5,280	1.00	5,292	1.00	-	-
Lee, <sup>3</sup> . . . .	252	May 25, 1896,	5,280	1.00	-	-	-	-
Lee, <sup>4</sup> . . . .	348	June 14, 1897,	6,762	1.28	-	-	6,645	1.26
Lenox, <sup>5</sup> . . . .	178	May 16, 1895,	5,280	1.00	-	-	-	-
Lenox, <sup>5</sup> . . . .	316	Feb. 7, 1897,	6,770	1.28	4,700	.89	1,696	.32
Monterey, . . .	256	June 5, 1896,	5,280	1.00	-	-	-	-
Mount Washington, .	92	Oct. 1, 1894,	8,300	1.57	-	-	-	-
North Adams, <sup>2</sup> . . .	47	- -	9,028	1.71	8,913	1.69	-	-
North Adams, <sup>6</sup> . . .	254	May 27, 1896,	5,807	1.10	-	-	-	-
North Adams, <sup>7</sup> . . .	393	Dec. 22, 1897,	12,436	2.36	-	-	2,870	.54
Otis, <sup>2</sup> . . . .	275	- -	5,280	1.00	-	-	-	-
Pittsfield, <sup>8</sup> . . . .	78	Aug. 7, 1894,	24,087	4.56	8,145	1.54	-	-
Pittsfield, <sup>9</sup> . . . .	259	June 10, 1896,	6,000	1.13	4,040	.76	-	-
Richmond, <sup>10</sup> . . . .	198	June 4, 1895,	10,462	1.98	-	-	-	-
Richmond, <sup>11</sup> . . . .	248	May 9, 1896,	5,300	1.00	5,280	1.00	-	-
Richmond, <sup>2,10</sup> . . . .	434	- -	12,900	2.44	1,911	.36	-	-
Sandisfield, . . . .	459	Mar. 13, 1899,	5,280	1.00	-	-	-	-
Savoy, <sup>2</sup> . . . .	276	- -	5,280	1.00	-	-	-	-
Stockbridge, <sup>12</sup> . . . .	136	Feb. 26, 1895,	10,700	2.02	-	-	-	-
Stockbridge, <sup>13</sup> . . . .	507	Dec. 2, 1900,	-	-	-	-	-	-
Tyringham, <sup>2</sup> . . . .	435	- -	5,500	1.04	-	-	-	-
West Stockbridge, . . .	166	Sept. 30, 1895,	6,146	1.16	-	-	-	-
Williamstown, <sup>14</sup> . . . .	145	Mar. 10, 1895,	10,576	2.00	10,147	1.92	-	-
Williamstown, <sup>15,16</sup> . . .	462	Apr. 29, 1899,	12,600	2.38	-	-	-	-
Windsor, . . . .	36	July 12, 1894,	42,787	8.10	1,501	.28	-	-
Totals, . . . .	.	.	459,175	86.97	103,089	19.52	13,720	2.60

Fifty petitions (sixteen county, five city and twenty-nine town), in two cities and twenty-three towns.

Average distance petitioned for, 9,183 feet (1.74 miles).

Thirty-five lay-outs, in two cities and ten towns.

Laid out on county petitions, 48,880 feet (9.26 miles).

Laid out on city petitions, 15,055 feet (2.85 miles).

Laid out on town petitions, 52,874 feet (10.01 miles).

Total length laid out, 116,809 feet (22.12 miles); average, 3,337 feet (.63 mile).

Percentage of length laid out to length petitioned for, 25.43.

<sup>1</sup> Pittsfield-Springfield road.

<sup>2</sup> On county petition.

<sup>3</sup> South Lee road.

<sup>4</sup> Lenox road.

<sup>5</sup> Lee road.

<sup>6</sup> Williamstown road.

<sup>7</sup> Pittsfield-North Adams road.

<sup>8</sup> Hancock-Lebanon Springs road.

<sup>9</sup> Dalton road.

<sup>10</sup> Hancock road.

<sup>11</sup> East road to Pittsfield.

<sup>12</sup> Old Housatonic Turnpike.

<sup>13</sup> Duplicate of former petition.

<sup>14</sup> North Adams road.

<sup>15</sup> Duplicate of county petition.

<sup>16</sup> Water Street.

*Bristol County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Acushnet, <sup>1</sup> . . .	96	Oct. 24, 1894,	35,500	6.73	3,363	.64	-	-
Acushnet, <sup>2</sup> . . .	97	Oct. 24, 1894,	6,326	1.20	-	-	-	-
Attleborough, <sup>3</sup> . . .	183	May 29, 1895,	14,153	2.68	-	-	-	-
Attleborough, <sup>4</sup> . . .	184	May 29, 1895,	5,122	.97	-	-	-	-
Attleborough, <sup>3</sup> . . .	268	June 18, 1896,	-	-	-	-	5,297	1.00
Attleborough, <sup>3</sup> . . .	508	Dec. 6, 1900,	-	-	-	-	-	-
Berkley, . . .	281	Aug. 3, 1896,	22,650	4.29	-	-	-	-
Bristol County, <sup>5</sup> . . .	53	July 24, 1894,	-	-	-	-	-	-
Dartmouth, <sup>6</sup> . . .	22	July 9, 1894,	24,000	4.55	6,875	1.30	4,850	.92
Dighton, <sup>7</sup> . . .	150	Mar. 26, 1895,	24,576	4.65	-	-	-	-
Dighton, <sup>8</sup> . . .	226	Jan. 2, 1896,	8,261	1.56	-	-	-	-
Easton, <sup>9</sup> . . .	139	Mar. 1, 1895,	39,000	7.39	-	-	-	-
Easton, <sup>10</sup> . . .	365	Sept. 2, 1897,	4,300	.81	-	-	4,229	.80
Fairhaven, . . .	31	July 10, 1894,	20,134	3.81	7,653	1.45	-	-
Freetown, . . .	314	Feb. 3, 1897,	16,850	3.20	-	-	-	-
Mansfield, . . .	341	Apr. 8, 1897,	5,121	.97	-	-	-	-
New Bedford, . . .	191	June 18, 1895,	2,950	.56	-	-	-	-
North Attleborough, . . .	18	July 5, 1894,	25,550	4.83	18,992	3.60	-	-
Raynham, . . .	134	Feb. 23, 1895,	23,000	4.36	-	-	-	-
Rehoboth, <sup>8</sup> . . .	132	Feb. 20, 1895,	29,187	5.53	9,993	1.89	-	-
Rehoboth, <sup>11</sup> . . .	476	June 19, 1899,	9,240	1.75	-	-	-	-
Seekonk, . . .	127	Feb. 6, 1895,	14,591	2.76	-	-	3,000	.57
Somerset, . . .	147	Mar. 30, 1895,	29,800	5.64	14,530	2.75	4,451	.84
Swansea, . . .	235	Mar. 10, 1896,	36,515	6.92	-	-	-	-
Taunton, <sup>12</sup> . . .	171	May 11, 1895,	25,864	4.89	-	-	-	-
Taunton, <sup>8,13</sup> . . .	179	May 16, 1895,	23,752	4.50	11,250	2.13	3,150	.60
Taunton, <sup>9,14</sup> . . .	180	May 19, 1895,	13,200	2.50	-	-	-	-
Westport, <sup>15</sup> . . .	53	-	24,100	4.57	22,459	4.25	-	-
Totals, . . .	.	.	483,742	91.62	95,115	18.01	24,977	4.73

Twenty-seven petitions (one county, four city and twenty-two town), in two cities and sixteen towns.

Average distance petitioned for, 17,916 feet (3.39 miles).

Thirty-seven lay-outs, in one city and ten towns.

Laid out on county petitions, 34,184 feet (6.47 miles).

Laid out on city petitions, 14,400 feet (2.73 miles).

Laid out on town petitions, 71,508 feet (13.54 miles).

Total length laid out, 120,092 feet (22.74 miles) ; average, 3,246 feet (.61 mile).

Percentage of length laid out to length petitioned for, 24.82.

<sup>1</sup> New Bedford-Boston road.

<sup>2</sup> Fairhaven road.

<sup>3</sup> Washington Street (Turnpike).

<sup>4</sup> North Avenue.

<sup>5</sup> See Dartmouth and Westport.

<sup>6</sup> Duplicate of county petition.

<sup>7</sup> Taunton-Fall River road.

<sup>8</sup> Taunton-Providence Turnpike.

<sup>9</sup> Taunton-Boston road.

<sup>10</sup> Brockton-Mansfield road.

<sup>11</sup> Town House road.

<sup>12</sup> Somerset Avenue, Bow, Spring and Dean streets.

<sup>13</sup> Winthrop Street.

<sup>14</sup> Broadway.

<sup>15</sup> On county petition.

*Dukes County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Chilmark, . . .	12	July 3, 1894,	38,345	7.26	-	-	-	-
Cottage City, <sup>1,2</sup> . . .	7	- -	13,117	2.48	12,538	2.37	-	-
Cottage City, <sup>1,3</sup> . . .	335	- -	2,150	.41	-	-	-	-
Dukes County, <sup>4</sup> . . .	7	July 2, 1894,	-	-	-	-	-	-
Dukes County, <sup>5</sup> . . .	335	Mar. 27, 1897,	-	-	-	-	-	-
Edgartown, <sup>1</sup> . . .	7	- -	13,100	2.48	1,705	.33	2,100	.40
Tisbury, <sup>6</sup> . . .	3	June 28, 1894,	10,609	2.01	10,194	1.93	-	-
Tisbury, <sup>1,7</sup> . . .	335	- -	4,769	.90	-	-	-	-
West Tisbury, . . .	4	June 28, 1894,	31,333	5.94	15,000	2.84	-	-
West Tisbury, <sup>8</sup> . . .	244	May 29, 1896,	6,300	1.19	-	-	-	-
Totals, . . .	.	.	119,723	22.67	40,988	7.76	2,100	.40

Six petitions (two county and four town), in five towns.

Average distance petitioned for, 19,954 feet (3.78 miles).

Twelve lay-outs in four towns.

Laid out on county petitions, 17,894 feet (3.39 miles).

Laid out on town petitions, 25,194 feet (4.77 miles).

Total length laid out, 43,088 feet (8.16 miles).

Percentage of length laid out to length petitioned for, 35.99.

<sup>1</sup> On county petition.

<sup>2</sup> Edgartown road.

<sup>3</sup> Vineyard Haven road.

<sup>4</sup> See Cottage City and Edgartown.

<sup>5</sup> See Cottage City and Tisbury.

<sup>6</sup> Gay Head road.

<sup>7</sup> Cottage City road.

<sup>8</sup> Petition for change of location.

*Essex County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Amesbury, . . .	203	July 22, 1895,	27,997	5.30	2,674	.51	-	-
Andover, <sup>1</sup> . . .	20	July 6, 1894,	31,400	5.95	12,586	2.38	3,600	.68
Andover, <sup>2,3</sup> . . .	436	- -	-	-	-	-	-	-
Andover, <sup>4</sup> . . .	442	Dec. 18, 1898,	25,080	4.75	-	-	-	-
Andover, <sup>5,5</sup> . . .	443	Dec. 18, 1898,	21,750	4.12	-	-	-	-
Beverly, <sup>2</sup> . . .	64	- -	13,900	2.64	10,613	2.01	-	-
Boxford, . . .	395	Dec. 23, 1897,	25,125	4.76	-	-	-	-
Danvers, <sup>6</sup> . . .	351	June 29, 1897,	6,267	1.19	-	-	-	-
Danvers, <sup>7</sup> . . .	490	Apr. 11, 1900,	27,450	5.20	-	-	-	-
Essex, . . .	364	Aug. 3, 1897,	22,412	4.25	-	-	-	-
Essex County, <sup>8</sup> . . .	64	July 30, 1894,	-	-	-	-	-	-
Essex County, <sup>9</sup> . . .	436	Oct. 26, 1898,	-	-	-	-	-	-
Georgetown, . . .	390	Dec. 16, 1897,	16,800	3.18	-	-	-	-
Gloucester, <sup>10</sup> . . .	28	July 10, 1894,	9,650	1.83	9,650	1.83	-	-
Gloucester, <sup>11</sup> . . .	110	Jan. 1, 1895,	54,120	10.25	-	-	-	-
Gloucester, <sup>10</sup> . . .	380	Apr. 5, 1897,	8,550	1.62	3,446	.65	-	-
Groveland, . . .	211	Aug. 8, 1895,	23,948	4.53	-	-	2,968	.56
Hamilton, <sup>2</sup> . . .	64	- -	18,100	3.43	3,490	.66	4,117	.78
Haverhill, <sup>12</sup> . . .	297	Nov. 4, 1896,	13,888	2.63	10,964	2.08	-	-
Haverhill, <sup>13</sup> . . .	471	June 1, 1899,	15,840	3.00	-	-	-	-
Ipswich, <sup>2,14</sup> . . .	64	- -	12,330	2.34	-	-	-	-
Ipswich, <sup>15</sup> . . .	239	Apr. 4, 1896,	11,900	2.25	-	-	-	-
Lawrence, <sup>16</sup> . . .	76	Aug. 2, 1894,	2,640	.50	-	-	-	-
Lawrence, <sup>17</sup> . . .	245	May 4, 1896,	4,660	.88	-	-	-	-
Lawrence, <sup>16</sup> . . .	284	Aug. 26, 1896,	2,300	.44	-	-	-	-
Lawrence, <sup>18</sup> . . .	285	Aug. 25, 1896,	1,750	.33	-	-	-	-
Lawrence, <sup>19</sup> . . .	290	Sept. 11, 1896,	1,408	.27	1,408	.27	-	-
Lawrence, <sup>2,20</sup> . . .	436	- -	7,920	1.50	-	-	-	-
Lawrence, <sup>21</sup> . . .	460	Mar. 16, 1899,	1,800	.34	-	-	-	-
Lynn, . . .	342	May 20, 1897,	9,120	1.73	4,777	.90	-	-
Manchester, . . .	167	May 1, 1895,	5,280	1.00	-	-	-	-
Merrimac, . . .	204	July 26, 1895,	15,134	2.87	4,838	.92	-	-
Methuen, <sup>12</sup> . . .	287	Aug. 31, 1896,	5,400	1.02	5,478	1.04	-	-
Methuen, <sup>22</sup> . . .	387	Dec. 8, 1897,	5,300	1.00	-	-	-	-
Methuen, <sup>12</sup> . . .	481	Jan. 22, 1900,	13,200	2.50	-	-	3,300	.63
Middleton, . . .	347	July 12, 1897,	26,501	5.02	-	-	-	-

<sup>1</sup> Boston-Lawrence road.<sup>2</sup> On county petition.<sup>3</sup> Lowell-Lawrence road.<sup>4</sup> Tewksbury road to Frye Village.<sup>5</sup> Duplicate of county petition.<sup>6</sup> Sylvan Street.<sup>7</sup> Locust, Maple, High and Water streets.<sup>8</sup> See Beverly, Wenham, Hamilton and Ipswich.<sup>9</sup> See Andover and Lawrence.<sup>10</sup> Western Avenue.<sup>11</sup> Essex Avenue, Washington Street and Rockport road.<sup>12</sup> Haverhill-Lawrence road.<sup>13</sup> Newton road.<sup>14</sup> South of arch bridge, Newburyport road.<sup>15</sup> North of arch bridge, Newburyport road.<sup>16</sup> Haverhill Street.<sup>17</sup> South Broadway.<sup>18</sup> Prospect Street.<sup>19</sup> Jackson Street.<sup>20</sup> Lowell road, south.<sup>21</sup> Loring Avenue.<sup>22</sup> Lowell road.



*Essex County — Concluded.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Newbury, <sup>1</sup> . . .	197	July 2, 1895,	22,388	4.24	2,750	.52	3,703	.70
Newbury, <sup>2</sup> . . .	410	Mar. 7, 1898,	23,133	4.38	-	-	-	-
Newburyport, <sup>3</sup> . . .	196	July 1, 1895,	10,100	1.91	9,259	1.75	-	-
Newburyport, <sup>2</sup> . . .	417	Apr. 22, 1898,	2,700	.51	-	-	-	-
North Andover, . . .	274	July 1, 1896,	10,186	1.93	-	-	4,175	.79
Peabody, <sup>4</sup> . . .	352	July 1, 1897,	12,120	2.30	-	-	-	-
Peabody, <sup>5</sup> . . .	353	July 1, 1897,	5,380	1.02	-	-	-	-
Rockport, . . .	135	Feb. 23, 1895,	5,736	1.08	-	-	-	-
Rowley, . . .	242	Apr. 23, 1896,	19,280	3.65	-	-	-	-
Salem, . . .	474	June 18, 1899,	700	.13	-	-	-	-
Salisbury, <sup>6</sup> . . .	243	Apr. 27, 1896,	10,560	2.00	-	-	-	-
Salisbury, <sup>7</sup> . . .	405	Feb. 11, 1898,	11,500	2.18	-	-	-	-
Saugus, . . .	34	July 11, 1894,	8,811	1.67	8,444	1.60	-	-
Swampscott, . . .	375	Oct. 14, 1897,	8,780	1.66	5,449	1.03	2,127	.40
Topsfield, <sup>8</sup> . . .	383	Nov. 27, 1897,	26,031	4.93	-	-	-	-
Topsfield, <sup>9</sup> . . .	491	Apr. 11, 1900,	11,100	2.10	-	-	-	-
Topsfield, <sup>10</sup> . . .	497	June 4, 1900,	7,920	1.50	-	-	-	-
Wenham, <sup>11</sup> . . .	64	-	9,100	1.72	3,194	.61	-	-
West Newbury, <sup>3</sup> . . .	101	Nov. 26, 1894,	27,017	5.11	11,731	2.22	-	-
West Newbury, <sup>12</sup> . . .	206	July 25, 1895,	4,000	.76	-	-	-	-
Totals, . . .	.	.	725,462	137.40	110,751	20.98	23,990	4.54

Fifty petitions (two county, fifteen city and thirty-three town), in seven cities and twenty-four towns.

Average distance petitioned for, 14,509 feet (2.75 miles).

Thirty-eight lay-outs, in six cities and twelve towns.

Laid out on county petitions, 21,414 feet (4.06 miles).

Laid out on city petitions, 39,504 feet (7.48 miles).

Laid out on town petitions, 73,823 feet (13.98 miles).

Total length petitioned for, 134,741 feet (25.52 miles); average, 3,546 feet (.67 mile).

Percentage of length laid out to length petitioned for, 18.57.

<sup>1</sup> Boston-Newburyport road *via* Oldtown.

<sup>2</sup> Boston-Newburyport road *via* Turnpike.

<sup>3</sup> Haverhill-Newburyport road.

<sup>4</sup> From Lynn line, Washington and Lynn streets.

<sup>5</sup> From Danvers line, Sylvan and Danvers streets.

<sup>6</sup> Newburyport road.

<sup>7</sup> Haverhill road.

<sup>8</sup> Salem, Boston, Main and Haverhill streets.

<sup>9</sup> Central and Wenham streets.

<sup>10</sup> Grove, Washington and Boxford streets.

<sup>11</sup> On county petition.

<sup>12</sup> Proposed relocation.

## Franklin County.

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Ashfield, <sup>1</sup> .	195	June 26, 1895,	5,300	1.00	-	-	-	-
Ashfield, <sup>2</sup> .	367	Sept. 18, 1897,	8,900	1.70	8,492	1.61	-	-
Ashfield, <sup>1</sup> .	454	Jan. 10, 1899,	5,200	.99	-	-	-	-
Ashfield, <sup>1</sup> .	464	May 1, 1899,	5,280	1.00	-	-	-	-
Buckland, <sup>3</sup> .	38	July 14, 1894,	1,170	.22	796	.15	-	-
Buckland, <sup>4</sup> .	112	Jan. 5, 1895,	5,280	1.00	5,308	1.01	-	-
Buckland, <sup>4</sup> .	224	Dec. 28, 1895,	5,280	1.00	5,325	1.01	-	-
Buckland, <sup>4</sup> .	315	Feb. 15, 1896,	5,280	1.00	3,820	.72	1,454	.27
Buckland, <sup>4</sup> .	458	Mar. 9, 1899,	17,160	3.25	-	-	1,744	.33
Charlemont, <sup>5</sup> .	120	Jan. 18, 1895,	7,500	1.42	3,366	.64	-	-
Charlemont, <sup>1</sup> .	450	Dec. 24, 1898,	34,320	6.50	693	.13	-	-
Colrain, <sup>1,3</sup> .	43	July 17, 1894,	-	-	-	-	-	-
Colrain, <sup>1</sup> .	133	Feb. 20, 1895,	12,438	2.36	5,679	1.08	-	-
Colrain, <sup>1</sup> .	432	Aug. 2, 1898,	13,500	2.56	-	-	-	-
Conway,	215	Sept. 4, 1895,	14,147	2.68	-	-	-	-
Deerfield, <sup>6,7</sup> .	24	-	9,400	1.79	8,093	1.53	-	-
Deerfield, <sup>8</sup> .	329	Mar. 10, 1897,	37,288	7.06	-	-	2,300	.44
Erving, <sup>3</sup> .	152	Mar. 29, 1895,	10,717	2.03	6,438	1.22	4,353	.82
Franklin County, <sup>9</sup> .	24	July 9, 1894,	-	-	-	-	-	-
Gill,	130	Feb. 7, 1895,	10,520	1.99	-	-	-	-
Greenfield, <sup>10</sup> .	188	June 10, 1895,	23,700	4.49	-	-	-	-
Greenfield, <sup>11</sup> .	332	Mar. 23, 1897,	6,722	1.27	3,100	.59	2,116	.40
Greenfield, <sup>11</sup> .	397	Dec. 23, 1897,	5,300	1.00	-	-	-	-
Greenfield, <sup>12</sup> .	456	Feb. 2, 1899,	4,680	.89	-	-	-	-
Greenfield, <sup>13</sup> .	457	Feb. 2, 1899,	8,550	1.62	-	-	-	-
Montague, <sup>14</sup> .	304	Dec. 18, 1896,	10,560	2.00	-	-	-	-
Montague, <sup>15</sup> .	359	July 11, 1897,	6,587	1.25	5,761	1.09	-	-
Montague, <sup>16</sup> .	360	July 11, 1897,	8,305	1.57	-	-	-	-
Montague, <sup>17</sup> .	453	Jan. 3, 1899,	4,000	.76	2,855	.54	-	-
Montague, <sup>18</sup> .	498	June 5, 1900,	16,050	3.04	-	-	-	-
New Salem,	258	June 8, 1896,	27,329	5.18	-	-	-	-
Northfield, <sup>19</sup> .	422	June 8, 1898,	-	-	-	-	-	-
Northfield, <sup>18</sup> .	489	Apr. 2, 1900,	38,280	7.25	-	-	-	-
Orange, <sup>3</sup> .	6	July 2, 1894,	30,559	5.74	11,544	2.19	2,195	.42
Orange, <sup>3</sup> .	103	Dec. 10, 1894,	-	-	-	-	-	-
Orange, <sup>3</sup> .	301	Nov. 27, 1896,	-	-	-	-	-	-
Shelburne, <sup>20</sup> .	35	July 11, 1894,	12,138	2.30	11,398	2.16	-	-
Shelburne, <sup>21</sup> .	227	Jan. 13, 1896,	5,280	1.00	-	-	-	-
Sunderland, <sup>3</sup> .	52	July 24, 1894,	4,151	.80	992	.17	-	-
Sunderland, <sup>22</sup> .	402	Jan. 11, 1898,	5,280	1.00	-	-	-	-
Whately, <sup>23</sup> .	325	Feb. 28, 1897,	5,400	1.03	-	-	-	-
Whately, <sup>8,24</sup> .	408	Feb. 11, 1898,	5,300	1.00	4,122	.78	-	-
Totals,			436,851	82.74	87,782	16.62	14,162	2.68

Forty-one petitions (one county and forty town), in sixteen towns.

Average distance petitioned for, 10,655 feet (2.02 miles).

Thirty-eight lay-outs, in twelve towns.

Laid out on county petitions, 45,809 feet (8.63 miles).

Laid out on town petitions, 56,135 feet (10.63 miles).

Total length laid out, 101,944 feet (19.31 miles); average, 2,683 feet (.51 mile).

Percentage of length laid out to length petitioned for, 23.34.

<sup>1</sup> Shelburne Falls road.

<sup>2</sup> Relocation.

<sup>3</sup> Duplicate of county petition.

<sup>4</sup> Ashfield road.

<sup>5</sup> In part mine road to Rowe.

<sup>6</sup> On county petition.

<sup>7</sup> Sunderland road.

<sup>8</sup> Greenfield-Northampton road.

<sup>9</sup> See Buckland, Colrain, Deerfield, Erving, Orange, Shelburne and Sunderland.

<sup>10</sup> Bernardston road.

<sup>11</sup> Deerfield road.

<sup>12</sup> Turner's Falls road.

<sup>13</sup> Montague City road.

<sup>14</sup> Miller's Falls via Ferry road.

<sup>15</sup> Miller's Falls via Pipe Line.

<sup>16</sup> Miller's Falls via L Street.

<sup>17</sup> Third and Prospect streets.

<sup>18</sup> Miller's Falls road.

<sup>19</sup> Covered by subsequent petition.

<sup>20</sup> Colrain road.

<sup>21</sup> Greenfield road.

<sup>22</sup> Sunderland Street.

<sup>23</sup> From Hatfield line.

<sup>24</sup> From Deerfield line.

*Hampden County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Agawam, . . . .	488	Apr. 2, 1900,	15,509	2.94	-	-	-	-
Blandford, <sup>1</sup> . . .	216	Sept. 7, 1895,	13,377	2.54	-	-	-	-
Blandford, <sup>2</sup> . . .	321	Feb. 23, 1897,	13,858	2.63	-	-	-	-
Brimfield, <sup>3</sup> . . .	40	July 6, 1894,	61,615	11.67	12,345	2.34	-	-
Brimfield, <sup>4,5</sup> . . .	131	-	9,355	1.77	-	-	-	-
Chester, <sup>6,7</sup> . . .	104	Dec. 11, 1894,	-	-	-	-	-	-
Chester, <sup>6,7</sup> . . .	426	June 23, 1898,	-	-	-	-	-	-
Chester, <sup>6</sup> . . . .	441	Dec. 16, 1898,	34,950	6.62	1,775	.34	1,697	.32
Chicopee, . . . .	223	Dec. 28, 1895,	5,700	1.08	4,847	.92	-	-
East Longmeadow, .	202	July 11, 1895,	25,426	4.82	-	-	-	-
Granville, . . . .	87	Sept. 6, 1894,	12,848	2.44	-	-	-	-
Hampden, . . . .	201	July 11, 1895,	18,031	3.42	-	-	-	-
Hampden County, <sup>8</sup> .	19	July 6, 1894,	-	-	-	-	-	-
Hampden County, <sup>9</sup> .	131	Feb. 12, 1895,	-	-	-	-	-	-
Hampden County, <sup>10</sup> .	241	Apr. 23, 1896,	-	-	-	-	-	-
Hampden County, <sup>11</sup> .	273	July 3, 1896,	-	-	-	-	-	-
Holyoke, <sup>4</sup> . . . .	273	-	5,300	1.00	-	-	-	-
Longmeadow, . . .	333	Mar. 24, 1897,	5,400	1.02	-	-	-	-
Ludlow, . . . . .	236	Mar. 11, 1896,	14,813	2.80	-	-	-	-
Monson, <sup>12</sup> . . . .	57	July 26, 1894,	14,960	2.83	4,933	.93	-	-
Monson, <sup>4,5</sup> . . . .	131	-	6,925	1.31	-	-	-	-
Monson, <sup>13</sup> . . . .	502	Oct. 1, 1900,	1,760	.33	-	-	-	-
Palmer, <sup>4</sup> . . . . .	131	-	46,034	8.72	3,600	.68	4,750	.90
Palmer, <sup>13</sup> . . . .	506	Nov. 27, 1900,	675	.13	-	-	-	-
Russell, <sup>4</sup> . . . . .	19	-	35,380	6.70	35,189	6.66	-	-
Wales, . . . . .	41	July 16, 1894,	35,922	6.80	-	-	-	-
Westfield, <sup>4</sup> . . . .	19	-	40,900	7.75	18,343	3.47	3,250	.62
West Springfield, <sup>14</sup> .	113	Jan. 8, 1895,	24,200	4.58	8,054	1.53	-	-
West Springfield, <sup>4</sup> .	241	-	5,708	1.08	-	-	-	-
Wilbraham, <sup>4</sup> . . . .	131	-	27,750	5.26	5,998	1.14	-	-
Wilbraham, <sup>15</sup> . . .	247	May 8, 1896,	4,117	.77	4,140	.73	-	-
Totals, . . . . .	.	.	480,513	91.01	99,224	18.80	9,697	1.84

Twenty-three petitions (four county, one city and eighteen town), in two cities and sixteen towns.

Average distance petitioned for, 20,892 feet (3.96 miles).

Thirty-six lay-outs, in one city and eight towns.

Laid out on county petitions, 78,462 feet (14.86 miles).

Laid out on city petitions, 4,847 feet (.92 mile).

Laid out on town petitions, 25,612 feet (4.85 miles).

Total length laid out, 108,921 feet (20.63 miles).

Percentage of length laid out to length petitioned for, 22.66.

<sup>1</sup> Huntington road.

<sup>2</sup> Russell road.

<sup>3</sup> Road to Brimfield Centre and Wales.

<sup>4</sup> On county petition.

<sup>5</sup> River road.

<sup>6</sup> Springfield-Pittsfield road.

<sup>7</sup> Covered by subsequent petition.

<sup>8</sup> See Russell, Westfield and West Springfield.

<sup>9</sup> See Wilbraham, Monson and Brimfield.

<sup>10</sup> See West Springfield; Agawam road.

<sup>11</sup> Holyoke-Springfield road.

<sup>12</sup> Palmer road.

<sup>13</sup> Brimfield road.

<sup>14</sup> Duplicate of county petition.

<sup>15</sup> Relocation.

*Hampshire County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Amherst, . . . . .	181	May 18, 1895,	5,356	1.02	-	-	-	-
Belchertown, <sup>1</sup> . . . .	220	Nov. 18, 1895,	5,280	1.00	-	-	3,509	.66
Belchertown, <sup>1</sup> . . . .	282	Aug. 6, 1896,	5,280	1.00	-	-	-	-
Belchertown, <sup>1</sup> . . . .	461	Mar. 16, 1899,	2,640	.50	-	-	-	-
Chesterfield, <sup>2</sup> . . . .	128	Feb. 6, 1895,	3,067	.58	-	-	-	-
Cummington, <sup>2</sup> . . . .	27	July 10, 1894,	55,053	10.43	-	-	-	-
Easthampton, <sup>3</sup> . . . .	114	Jan. 10, 1895,	5,900	1.12	-	-	4,200	.80
Easthampton, <sup>2,4</sup> . . . .	189	July 10, 1895,	7,500	1.42	6,963	1.32	-	-
Enfield, . . . . .	283	Aug. 25, 1896,	9,593	1.82	-	-	-	-
Goshen, . . . . .	2	June 28, 1894,	29,480	5.58	10,058	1.91	-	-
Granby, <sup>5,6</sup> . . . . .	5	-	3,347	.63	3,347	.63	-	-
Granby, <sup>5</sup> . . . . .	289	Sept. 9, 1896,	10,700	2.03	-	-	-	-
Greenwich, . . . . .	295	Oct. 17, 1896,	5,464	1.04	-	-	-	-
Hadley, <sup>2,4</sup> . . . . .	94	Oct. 20, 1894,	5,673	1.08	5,676	1.08	-	-
Hadley, <sup>4</sup> . . . . .	200	July 11, 1895,	4,133	.78	4,133	.78	-	-
Hadley, <sup>4</sup> . . . . .	286	Aug. 27, 1896,	14,749	2.79	4,585	.87	1,066	.20
Hampshire County, <sup>7</sup> . .	5	June 29, 1894,	-	-	-	-	-	-
Hatfield, <sup>8</sup> . . . . .	165	Apr. 23, 1895,	5,280	1.00	-	-	-	-
Hatfield, <sup>9</sup> . . . . .	164	Apr. 23, 1895,	2,500	.47	-	-	-	-
Huntington, . . . . .	99	Nov. 24, 1894,	14,408	2.73	5,336	1.01	-	-
Middlefield, . . . . .	177	May 14, 1895,	5,400	1.03	-	-	-	-
Northampton, <sup>2,10</sup> . . .	97	July 31, 1894,	2,997	.56	2,997	.56	-	-
Northampton, <sup>2,11</sup> . . .	194	June 25, 1895,	9,235	1.75	5,092	.96	800	.15
Northampton, <sup>12</sup> . . .	470	May 27, 1899,	4,500	.85	-	-	-	-
South Hadley, <sup>5,6</sup> . . .	5	-	15,571	2.95	11,400	2.16	1,375	.26
South Hadley, <sup>5,2</sup> . . .	288	Sept. 3, 1896,	-	-	-	-	-	-
Southampton, . . . .	253	May 25, 1896,	5,280	1.00	-	-	-	-
Ware, <sup>13</sup> . . . . .	205	July 29, 1895,	4,100	.77	3,582	.68	518	.10
Ware, <sup>13</sup> . . . . .	455	Feb. 2, 1899,	10,300	1.95	-	-	5,400	1.02
Williamsburg, <sup>6</sup> . . . .	5	-	31,743	6.01	3,100	.58	-	-
Williamsburg, <sup>2,14</sup> . . .	129	Feb. 6, 1895,	-	-	-	-	-	-
Williamsburg, <sup>2,15</sup> . . .	249	May 11, 1896,	-	-	-	-	-	-
Williamsburg, <sup>16</sup> . . .	411	Mar. 17, 1898,	6,036	1.14	6,036	1.14	-	-
Williamsburg, <sup>2,15</sup> . . .	439	Dec. 12, 1898,	-	-	-	-	-	-
Totals, . . . . .			290,565	55.03	72,305	13.69	16,868	3.19

Thirty-one petitions (one county, three city and twenty-seven town), in one city and seventeen towns.

Average distance petitioned for, 9,373 feet (1.78 miles).

Thirty-three lay-outs, in one city and nine towns

Laid out on county petitions, 50,808 feet (9.62 miles).

Laid out on city petitions, 2,997 feet (.56 miles).

Laid out on town petitions, 35,368 feet (6.70 miles).

Total length laid out, 89,173 feet (16.88 miles).

Percentage of length laid out to length petitioned for, 30.67.

<sup>1</sup> Granby road.

<sup>2</sup> Duplicate of county petition.

<sup>3</sup> Holyoke Street.

<sup>4</sup> Northampton road.

<sup>5</sup> Holyoke road.

<sup>6</sup> On county petition.

<sup>7</sup> See Chesterfield, Cummington, Easthampton, Granby, Goshen, Hadley, Northampton, South Hadley and Williamsburg.

<sup>8</sup> Road to Hatfield village.

<sup>9</sup> North Hatfield road.

<sup>10</sup> Bridge Street.

<sup>11</sup> Easthampton road.

<sup>12</sup> Holyoke road *via* Smith's Ferry.

<sup>13</sup> Ware-Gilbertville road.

<sup>14</sup> Chesterfield road.

<sup>15</sup> Goshen road.

<sup>16</sup> Relocation.



*Middlesex County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.]	
					Feet.	Miles.	Feet.	Miles.
Acton, <sup>1</sup> . . . .	119	Jan. 7, 1895,	6,563	1.24	-	-	-	-
Acton, <sup>1</sup> . . . .	138	Feb. 28, 1895,	12,129	2.30	-	-	-	-
Acton, <sup>2,3</sup> . . . .	233	-	21,922	4.15	-	-	-	-
Acton, <sup>3,4</sup> . . . .	413	-	24,500	4.64	11,100	2.10	3,600	.70
Ashby, . . . .	1	June 27, 1894,	18,625	3.53	18,826	3.57	-	-
Ashland, <sup>5</sup> . . . .	361	July 24, 1897,	11,843	2.24	-	-	-	-
Ashland, <sup>6</sup> . . . .	362	July 24, 1897,	9,112	1.73	-	-	-	-
Ashland, <sup>7</sup> . . . .	500	June 21, 1900,	6,600	1.25	-	-	-	-
Ayer, . . . .	225	Jan. 1, 1896,	14,246	2.70	-	-	-	-
Bedford, . . . .	175	May 14, 1895,	19,635	3.72	2,872	.54	-	-
Belmont, . . . .	343	May 21, 1897,	5,109	.97	-	-	-	-
Billerica, . . . .	264	June 13, 1896,	18,490	3.50	-	-	-	-
Boxborough, <sup>2,3</sup> . . . .	233	-	17,500	3.31	7,200	1.36	-	-
Burlington, . . . .	336	Apr. 16, 1897,	14,205	2.69	-	-	-	-
Carlisle, . . . .	109	Dec. 26, 1894,	26,381	4.99	-	-	-	-
Chelmsford, <sup>8,9</sup> . . . .	50	July 20, 1894,	5,583	1.06	-	-	-	-
Chelmsford, <sup>3,9</sup> . . . .	266	-	6,100	1.16	4,908	.93	-	-
Chelmsford, <sup>10</sup> . . . .	467	May 24, 1899,	6,600	1.25	-	-	-	-
Chelmsford, <sup>11</sup> . . . .	468	May 24, 1899,	9,240	1.75	-	-	-	-
Concord, <sup>12</sup> . . . .	81	Sept. 11, 1894,	10,393	1.97	7,719	1.46	-	-
Concord, <sup>4,8</sup> . . . .	388	Dec. 7, 1897,	3,800	.72	-	-	2,786	.53
Concord, <sup>13</sup> . . . .	487	Mar. 23, 1900,	8,232	1.57	-	-	-	-
Dracut, <sup>14</sup> . . . .	344	June 3, 1897,	21,378	4.05	-	-	-	-
Dracut, <sup>15</sup> . . . .	473	June 8, 1899,	17,234	3.26	-	-	-	-
Dunstable, . . . .	291	Sept. 17, 1896,	8,778	1.66	-	-	-	-
Framingham, <sup>16</sup> . . . .	303	Dec. 17, 1896,	8,296	1.57	-	-	-	-
Framingham, <sup>17</sup> . . . .	492	Apr. 20, 1900,	17,420	3.30	-	-	-	-
Groton, <sup>18</sup> . . . .	105	Dec. 17, 1894,	40,215	7.62	-	-	-	-
Groton, <sup>4,8</sup> . . . .	219	Nov. 14, 1895,	22,597	4.28	-	-	-	-
Holliston, . . . .	363	July 30, 1897,	33,480	6.34	-	-	-	-
Hopkinton, . . . .	309	Jan. 6, 1897,	20,440	3.87	-	-	-	-
Hudson, . . . .	370	Sept. 25, 1897,	31,057	5.88	-	-	-	-
Lexington, <sup>12</sup> . . . .	79	Aug. 8, 1894,	18,300	3.46	18,214	3.45	-	-
Lexington, <sup>19</sup> . . . .	419	May 14, 1898,	13,200	2.50	-	-	4,462	.85
Lincoln, <sup>12</sup> . . . .	80	Aug. 8, 1894,	10,850	2.06	10,885	2.07	-	-
Lincoln, <sup>20</sup> . . . .	377	Aug. 30, 1897,	17,800	3.37	-	-	-	-
Littleton, <sup>21</sup> . . . .	218	Nov. 14, 1895,	12,110	2.29	-	-	-	-
Littleton, <sup>22,8</sup> . . . .	412	-	10,200	1.93	-	-	-	-

<sup>1</sup> Littleton road, *via* North Acton.<sup>2</sup> Harvard Turnpike.<sup>3</sup> On county petition.<sup>4</sup> Great road.<sup>5</sup> Southborough road.<sup>6</sup> Pond Street.<sup>7</sup> Framingham road.<sup>8</sup> Duplicate of county petition.<sup>9</sup> Truant School road.<sup>10</sup> Tyngsborough road.<sup>11</sup> Billerica road.<sup>12</sup> Lexington-Concord road.<sup>13</sup> Elm Street.<sup>14</sup> North road to Methuen.<sup>15</sup> River road; new location.<sup>16</sup> Concord Street.<sup>17</sup> Ashland-Natick road.<sup>18</sup> Lowell-Fitchburg road.<sup>19</sup> Bedford road.<sup>20</sup> South Great road.<sup>21</sup> Littleton Depot to Great road.<sup>22</sup> Ayer road.



*Middlesex County — Continued.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
					1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Littleton, <sup>1,2</sup>	413	-	-	27,800	5.27	-	-	-
Lowell, <sup>2,3</sup>	44	-	-	5,230	.99	5,115	.97	-
Lowell, <sup>4,5</sup>	55	July 25, 1894,		7,062	1.34	7,045	1.34	-
Lowell, <sup>6</sup>	409	Mar. 9, 1898,		5,800	1.10	-	-	-
Marlborough, <sup>7</sup>	143	Mar. 15, 1895,		12,868	2.44	7,233	1.37	1,767 .32
Marlborough, <sup>8</sup>	271	June 26, 1896,		17,835	3.38	2,142	.41	-
Maynard, .	366	Sept. 9, 1897,		11,164	2.11	-	-	-
Medford, <sup>9,4</sup>	265	June 13, 1896,		4,918	.93	-	-	-
Medford, <sup>9</sup>	446	Dec. 19, 1898,		4,200	.80	-	-	-
Melrose, .	485	Mar. 8, 1900,		5,966	1.13	-	-	-
Middlesex County, <sup>10</sup>	44	July 17, 1894,		-	-	-	-	-
Middlesex County, <sup>5,11</sup>	45	July 17, 1894,		-	-	-	-	-
Middlesex County, <sup>12,13</sup>	233	Feb. 25, 1896,		-	-	-	-	-
Middlesex County, <sup>5,11</sup>	266	June 15, 1896,		-	-	-	-	-
Middlesex County, <sup>9</sup>	274	July 13, 1896,		-	-	-	-	-
Middlesex County, <sup>14</sup>	412	Feb. 3, 1898,		-	-	-	-	-
Middlesex County, <sup>1,15</sup>	413	Feb. 3, 1898,		-	-	-	-	-
Middlesex County, <sup>16</sup>	427	June 25, 1898,		-	-	-	-	-
Middlesex County, <sup>17</sup>	494	May 8, 1900,		-	-	-	-	-
Middlesex County, <sup>18</sup>	503	Oct. 19, 1900,		-	-	-	-	-
Natick, <sup>19</sup>	251	May 21, 1896,		6,813	1.29	-	-	-
Natick, <sup>4,20</sup>	493	May 8, 1900,		17,160	3.25	-	-	-
Newton, <sup>21</sup>	337	Apr. 26, 1897,		780	.15	-	-	-
Newton, <sup>22</sup>	477	Nov. 1, 1899,		5,500	1.04	-	-	-
North Reading, .	107	Dec. 24, 1894,		31,060	5.88	5,329	1.01	-
Pepperell, .	299	Nov. 11, 1896,		18,700	3.54	-	-	-
Reading, .	157	Apr. 10, 1895,		23,100	4.38	4,500	.85	1,150 .22
Sherborn, .	250	May 14, 1896,		5,500	1.04	-	-	-
Shirley, .	416	Apr. 21, 1898,		7,400	1.40	-	-	-
Stoneham, <sup>4,9</sup>	280	July 30, 1896,		6,448	1.22	3,006	.57	-
Stoneham, <sup>9</sup>	355	July 7, 1897,		3,086	.59	-	-	3,300 .62
Stow, .	378	Nov. 1, 1897,		24,215	4.59	-	-	-
Sudbury, <sup>23</sup>	214	Aug. 24, 1895,		5,300	1.00	-	-	-
Sudbury, <sup>23</sup>	230	Feb. 16, 1896,		20,400	3.88	5,098	.96	2,855 .54
Tewksbury, <sup>24</sup>	257	June 5, 1896,		14,700	2.78	-	-	3,000 .57
Tewksbury, <sup>24</sup>	357	July 8, 1897,		20,188	3.82	-	-	-

<sup>1</sup> Great road.<sup>2</sup> On county petition.<sup>3</sup> Tyngsborough road, boulevard.<sup>4</sup> Duplicate of county petition.<sup>5</sup> Truant School road.<sup>6</sup> First Street, to Dracut.<sup>7</sup> Northborough road.<sup>8</sup> Sudbury road.<sup>9</sup> Medford-Stoneham road.<sup>10</sup> See Lowell and Tyngsborough.<sup>11</sup> See Lowell and Chelmsford.<sup>12</sup> Harvard Turnpike.<sup>13</sup> See Acton and Boxborough.<sup>14</sup> Littleton Depot to Great road.<sup>15</sup> See Acton, Littleton, Concord and Groton.<sup>16</sup> See Tewksbury.<sup>17</sup> See Natick.<sup>18</sup> See Westford.<sup>19</sup> Sherborn road.<sup>20</sup> Central Street.<sup>21</sup> At Weston Bridge.<sup>22</sup> Winchester and Needham streets.<sup>23</sup> Boston-Worcester road.<sup>24</sup> Boston-Lowell road.

*Middlesex County — Concluded.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
					1894-99.		1900.	
			Feet.	Miles.	Feet.	Miles.	Feet.	Miles.
Tewksbury, <sup>1,3</sup> . . .	427	- -	11,088	2.10	-	-	-	-
Townsend, <sup>2</sup> . . .	149	Mar. 21, 1895,	16,830	3.19	9,803	1.86	3,966	.75
Townsend, <sup>2</sup> . . .	466	May 24, 1899,	17,800	3.37	-	-	-	-
Tyngsborough, <sup>3,4</sup> . . .	44	- -	15,552	2.94	15,588	2.95	-	-
Tyngsborough, <sup>5</sup> . . .	444	Dec. 18, 1898,	21,120	4.00	-	-	-	-
Wakefield, <sup>6</sup> . . .	400	Dec. 29, 1897,	17,979	3.41	-	-	-	-
Wakefield, <sup>7</sup> . . .	469	May 15, 1899,	8,530	1.62	-	-	-	-
Watertown, . . .	151	Mar. 27, 1895,	17,695	3.35	4,472	.85	-	-
Wayland, <sup>8</sup> . . .	212	Aug. 10, 1895,	15,450	2.93	3,206	.61	8,799	1.67
Wayland, <sup>9</sup> . . .	334	Mar. 31, 1897,	11,620	2.20	-	-	-	-
Westford, <sup>10</sup> . . .	115	Jan. 15, 1895,	21,900	4.15	-	-	-	-
Westford, <sup>3,11</sup> . . .	503	- -	15,840	3.00	-	-	-	-
Weston, <sup>8</sup> . . .	322	Feb. 24, 1897,	17,508	3.32	16,644	3.15	-	-
Weston, <sup>9</sup> . . .	323	Feb. 24, 1897,	21,269	4.03	-	-	-	-
Wilmington, <sup>12</sup> . . .	345	June 10, 1897,	37,682	7.14	-	-	-	-
Wilmington, <sup>13</sup> . . .	349	July 22, 1897,	9,918	1.88	-	-	-	-
Winchester, . . .	244	Apr. 28, 1896,	10,310	1.95	3,987	.76	6,319	1.20
Woburn, <sup>14</sup> . . .	448	Dec. 21, 1898,	9,925	1.88	-	-	4,900	.93
Woburn, <sup>15</sup> . . .	449	Dec. 21, 1898,	19,800	3.75	-	-	-	-
Totals, . . .	.	.	1,211,272	229.41	174,892	33.12	46,904	8.90

Eighty-three petitions (ten county, eleven city and sixty-two town), in six cities and forty-two towns.

Average distance petitioned for, 14,594 feet (2.76 miles).

Sixty-four lay-outs, in three cities and nineteen towns.

Laid out on county petitions, 61,348 feet (11.62 miles).

Laid out on city petitions, 28,202 feet (5.34 miles).

Laid out on town petitions, 132,246 feet (25.05 miles).

Total length laid out, 221,796 feet (42.01 miles); average, 3,466 feet (.66 mile).

Percentage of length laid out to distance petitioned for, 18.31.

<sup>1</sup> Lowell-Lawrence road.

<sup>2</sup> Ashby-Pepperell road.

<sup>3</sup> On county petition.

<sup>4</sup> Lowell road, north of river.

<sup>5</sup> Lowell road, south of river.

<sup>6</sup> Railroad and Nahant streets.

<sup>7</sup> Main and Lowell streets.

<sup>8</sup> Boston-Worcester road.

<sup>9</sup> Boston-Framingham road.

<sup>10</sup> Carlisle road.

<sup>11</sup> Great road to Lowell.

<sup>12</sup> Boston-Lawrence road.

<sup>13</sup> Boston-Lowell road.

<sup>14</sup> Cambridge Street.

<sup>15</sup> Main, School, Plain, Washington and Salem streets and Mishawum road.

*Nantucket County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
					1894-99.		1900.	
			Feet.	Miles.	Feet.	Miles.	Feet.	Miles.
Nantucket, . . .	11	July 3, 1894,	34,185	6.47	23,590	4.47	3,700	.70

Ten lay-outs.

Length laid out, 27,290 feet (5.17 miles).

Percentage of length laid out to length petitioned for, 79.91.

*Norfolk County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Bellingham, <sup>1</sup> . . .	173	May 13, 1895,	3,900	.74	-	-	-	-
Bellingham, <sup>1</sup> . . .	424	June 22, 1898,	46,700	8.84	-	-	-	-
Braintree, . . .	116	Jan. 10, 1895,	6,700	1.27	-	-	2,431	.46
Cohasset, . . .	158	Apr. 2, 1895,	11,300	2.14	4,751	.90	4,400	.83
Dedham, . . .	307	Dec. 31, 1896,	3,900	.74	-	-	-	-
Foxborough, <sup>2</sup> . . .	123	Jan. 29, 1895,	23,875	4.52	-	-	-	-
Foxborough, <sup>3</sup> . . .	163	Apr. 24, 1895,	5,840	1.11	-	-	-	-
Franklin, . . .	298	Nov. 6, 1896,	9,227	1.75	-	-	-	-
Holbrook, . . .	9	July 10, 1894,	11,848	2.24	5,817	1.11	-	-
Medway, <sup>4</sup> . . .	311	Jan. 18, 1897,	5,535	1.05	-	-	-	-
Medway, <sup>5</sup> . . .	368	Sept. 2, 1897,	9,292	1.76	-	-	-	-
Millis, . . .	381	Nov. 12, 1897,	6,265	1.19	-	-	-	-
Milton, . . .	190	June 15, 1895,	5,730	1.09	2,600	.49	2,000	.38
Needham, <sup>6</sup> . . .	154	Apr. 2, 1895,	9,050	1.71	-	-	-	-
Needham, <sup>7</sup> . . .	478	Nov. 1, 1899,	5,900	1.12	-	-	-	-
Norfolk, <sup>8</sup> . . .	88	Sept. 21, 1894,	7,676	1.45	7,676	1.45	-	-
Norfolk, <sup>9</sup> . . .	356	July 8, 1897,	21,467	4.07	-	-	-	-
Norwood, . . .	51	July 21, 1894,	18,747	3.55	10,822	2.05	-	-
Quincy, <sup>10</sup> . . .	237	Mar. 18, 1896,	9,900	1.87	2,607	.49	-	-
Quincy, <sup>11</sup> . . .	292	Sept. 17, 1896,	6,515	1.23	-	-	-	-
Randolph, . . .	208	Aug. 3, 1895,	9,050	1.71	-	-	-	-
Sharon, . . .	159	Apr. 12, 1895,	28,713	5.44	-	-	-	-
Stoughton, . . .	228	Jan. 15, 1896,	20,538	3.89	-	-	-	-
Walpole, . . .	77	Aug. 4, 1894,	30,300	5.74	19,369	3.67	4,594	.87
Wellesley, <sup>12</sup> . . .	425	June 22, 1898,	21,120	4.00	-	-	-	-
Wellesley, <sup>13</sup> . . .	495	May 8, 1900,	6,340	1.20	-	-	-	-
Westwood, . . .	354	July 2, 1897,	5,610	1.06	4,300	.82	1,230	.23
Weymouth, <sup>14</sup> . . .	59	July 27, 1894,	9,400	1.78	9,237	1.75	-	-
Weymouth, <sup>15</sup> . . .	63	July 30, 1894,	1,330	.25	1,330	.25	-	-
Weymouth, <sup>16</sup> . . .	414	Mar. 28, 1898,	28,090	5.32	-	-	-	-
Wrentham, . . .	32	July 10, 1894,	38,150	7.23	18,986	3.60	5,844	1.11
Wrentham, <sup>17</sup> . . .	496	May 24, 1900,	-	-	-	-	-	-
Totals, . . .	.	.	428,008	81.06	87,495	16.57	20,499	3.88

Thirty-two petitions (two city and thirty town), from one city and twenty-one towns.

Average distance petitioned for, 13,375 feet (2.53 miles).

Forty lay-outs, in one city and ten towns.

Laid out on city petitions, 2,607 feet (.49 mile).

Laid out on town petitions, 105,387 feet (19.96 miles); average, 2,700 feet (.51 mile).

Total length laid out, 107,994 feet (20.45 miles).

Percentage of length laid out to length petitioned for, 25.23.

<sup>1</sup> Woonsocket road.

<sup>2</sup> Mansfield-Norfolk road.

<sup>3</sup> Village road.

<sup>4</sup> Village Street.

<sup>5</sup> Village, Main and Oakland streets.

<sup>6</sup> Great Plain Avenue.

<sup>7</sup> Highland Avenue.

<sup>8</sup> Providence Turnpike.

<sup>9</sup> Walpole-Franklin road.

<sup>10</sup> Washington Street, Weymouth road.

<sup>11</sup> Randolph Street.

<sup>12</sup> Worcester Turnpike.

<sup>13</sup> Central Street to Natick line.

<sup>14</sup> Bridge Street, Hingham road.

<sup>15</sup> Ann Street.

<sup>16</sup> Washington and Main streets.

<sup>17</sup> For widening of portion of road.

*Plymouth County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Abington, <sup>1</sup>	58	July 27, 1894,	8,660	1.64	-	-	-	-
Abington, <sup>2</sup>	192	Apr. 19, 1895,	10,300	1.95	-	-	3,700	.70
Bridgewater, <sup>3</sup>	217	Nov. 14, 1895,	6,600	1.25	-	-	-	-
Bridgewater, <sup>4</sup>	499	June 14, 1900,	19,270	3.65	-	-	-	-
Brockton, <sup>5</sup>	61	July 27, 1894,	5,525	1.05	-	-	-	-
Brockton, <sup>6</sup>	270	June 22, 1896,	9,860	1.87	9,860	1.87	-	-
Brockton, <sup>7</sup>	482	Feb. 8, 1900,	3,470	.66	-	-	3,468	.66
Brockton, <sup>8</sup>	505	Nov. 22, 1900,	3,770	.71	-	-	-	-
Carver, <sup>9</sup>	326	Mar. 4, 1897,	-	-	-	-	-	-
Carver,	458	Dec. 9, 1898,	28,400	5.38	-	-	-	-
Duxbury,	70	July 31, 1894,	33,000	6.25	10,850	2.05	-	-
East Bridgewater,	240	Apr. 8, 1896,	6,300	1.19	-	-	-	-
Halifax,	54	July 24, 1894,	23,463	4.44	-	-	-	-
Hanover,	66	July 30, 1894,	24,157	4.58	-	-	-	-
Hanson, <sup>10</sup>	262	June 12, 1896,	5,280	1.00	-	-	-	-
Hanson, <sup>11</sup>	263	June 12, 1896,	5,280	1.00	-	-	-	-
Hingham,	8	July 3, 1894,	27,666	5.24	14,037	2.66	-	-
Lakeville,	174	May 14, 1895,	5,300	1.00	-	-	-	-
Marion,	29	July 10, 1894,	27,248	5.16	15,080	2.86	-	-
Marshfield,	71	July 31, 1894,	40,400	7.65	10,564	2.00	-	-
Mattapoisett,	30	July 10, 1894,	24,992	4.73	6,134	1.17	4,300	.81
Middleborough, <sup>12</sup>	68	July 31, 1894,	44,859	8.50	14,576	2.76	-	-
Middleborough, <sup>13</sup>	428	June 30, 1898,	32,310	6.12	-	-	-	-
Norwell,	246	May 5, 1896,	5,922	1.12	-	-	-	-
Pembroke,	234	Feb. 27, 1896,	5,280	1.00	-	-	-	-
Plymouth, <sup>14</sup>	72	July 31, 1894,	90,420	17.12	7,509	1.42	-	-
Plymouth, <sup>15</sup>	269	June 22, 1896,	5,846	1.11	5,846	1.11	-	-
Plymouth, <sup>16</sup>	374	Oct. 11, 1897,	6,915	1.31	6,987	1.32	-	-
Plymouth, <sup>14</sup>	501	Aug. 27, 1900,	-	-	-	-	-	-
Plympton,	121	Jan. 22, 1895,	5,280	1.00	-	-	-	-
Rochester,	172	May 13, 1895,	22,108	4.19	-	-	-	-
Rockland,	75	Aug. 1, 1894,	6,900	1.31	-	-	-	-
Scituate,	69	July 31, 1894,	23,500	5.40	6,139	1.17	3,189	.60
Wareham, <sup>16</sup>	42	July 16, 1894,	42,000	7.95	3,014	.57	-	-
Wareham, <sup>17</sup>	406	Feb. 5, 1898,	18,100	3.43	5,529	1.05	-	-
West Bridgewater,	221	Dec. 4, 1895,	17,100	3.24	-	-	5,252	1.00
Whitman,	65	July 30, 1894,	8,900	1.68	8,957	1.69	-	-
Totals,	.	.	659,381	124.88	125,082	23.69	19,909	3.77

Thirty-seven petitions (four city and thirty-three town), in one city and twenty-four towns.

Average distance petitioned for, 17,821 feet (3.37 miles).

Forty-nine lay-outs, in one city and twelve towns.

Laid out on city petitions, 13,323 feet (2.52 miles).

Laid out on town petitions, 131,663 feet (24.95 miles).

Total length laid out, 144,991 feet (27.47 miles); average, 2,959 feet (.56 mile).

Percentage of length laid out to length petitioned for, 22.

<sup>1</sup> Randolph Street to Holbrook line.

<sup>2</sup> Brockton Avenue.

<sup>3</sup> North Main Street.

<sup>4</sup> South Main Street.

<sup>5</sup> Crescent Street to Whitman line.

<sup>6</sup> Belmont Street to Easton line.

<sup>7</sup> Centre Street to Abington line.

<sup>8</sup> Main Street to West Bridgewater line.

<sup>9</sup> Covered by subsequent petition.

<sup>10</sup> Main Street.

<sup>11</sup> Whitman Street.

<sup>12</sup> To Wareham line.

<sup>13</sup> To Bridgewater line.

<sup>14</sup> South Shore road.

<sup>15</sup> Pine Hills road.

<sup>16</sup> Fall River-Cape Cod road.

<sup>17</sup> Onset road.

*Suffolk County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
					1894-99.		1900.	
			Feet.	Miles.	Feet.	Miles.	Feet.	Miles.
Chelsea, . . . .	56	July 25, 1894,	5,800	1.10	-	-	-	-
Revere, <sup>1</sup> . . . .	60	July 27, 1894,	11,500	2.18	3,535	.67	-	-
Revere, <sup>2</sup> . . . .	346	June 10, 1897,	6,506	1.23	-	-	-	-
Revere, <sup>3</sup> . . . .	350	June 24, 1897,	3,469	.66	3,045	.58	-	-
Revere, <sup>4</sup> . . . .	407	Feb. 7, 1898,	11,000	2.09	-	-	-	-
Winthrop, <sup>5</sup> . . . .	73	July 31, 1894,	18,100	3.42	-	-	-	-
Winthrop, <sup>6</sup> . . . .	451	Dec. 29, 1898,	-	-	-	-	-	-
Totals, . . . .	.	.	56,375	10.68	6,580	1.24	-	-

Seven petitions (one city and six town) from one city and two towns.

Average distance petitioned for, 8,054 feet (1.53 miles).

Four lay-outs, in one town.

Total length laid out, 6,570 feet (1.24 miles).

Percentage of length laid out to length petitioned for, 11.42.

<sup>1</sup> Salem Turnpike.

<sup>4</sup> Ocean Avenue extension.

<sup>2</sup> Ocean Avenue.

<sup>5</sup> Revere Street and Crest Avenue.

<sup>3</sup> Atlantic Avenue.

<sup>6</sup> Covered by previous petition.

*Worcester County.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
					1894-99.		1900.	
			Feet.	Miles.	Feet.	Miles.	Feet.	Miles.
Ashburnham, . . . .	463	Apr. 17, 1899,	13,200	2.50	-	-	-	-
Athol, . . . .	37	July 12, 1894,	16,800	3.18	8,475	1.61	-	-
Auburn, . . . .	148	Mar. 30, 1895,	28,095	5.32	14,753	2.80	-	-
Auburn, <sup>1</sup> . . . .	433	Aug. 24, 1895,	1,437	.27	1,437	.27	-	-
Barre, . . . .	146	Mar. 10, 1895,	15,286	2.90	6,723	1.27	1,888	.36
Blackstone, <sup>2</sup> . . . .	140	Mar. 2, 1895,	7,700	1.46	-	-	-	-
Blackstone, <sup>3</sup> . . . .	399	Dec. 29, 1897,	12,304	2.33	3,378	.64	2,778	.53
Bolton, <sup>4</sup> . . . .	185	June 3, 1895,	5,300	1.00	-	-	-	-
Bolton, <sup>5</sup> . . . .	472	June 5, 1899,	32,500	6.16	-	-	-	-
Boylston, . . . .	398	Dec. 23, 1897,	10,560	2.00	-	-	-	-
Brookfield, <sup>6</sup> . . . .	111	Jan. 2, 1895,	5,972	1.13	-	-	-	-
Brookfield, <sup>6</sup> . . . .	300	Nov. 27, 1896,	22,025	4.17	4,670	.88	2,686	.51
Charlton, <sup>7</sup> . . . .	261	June 11, 1896,	10,900	2.06	-	-	-	-

<sup>1</sup> Relocation.

<sup>5</sup> Boston-Fitchburg road.

<sup>2</sup> South Main Street.

<sup>6</sup> Springfield-Worcester road.

<sup>3</sup> North Main Street.

<sup>7</sup> Charlton Depot to Charlton City.

<sup>4</sup> Hudson road.



*Worcester County — Continued.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Charlton, <sup>1</sup>	389	Dec. 13, 1897,	5,280	1.00	-	-	-	-
Dana,	294	Sept. 24, 1896,	10,560	2.00	-	-	-	-
Douglas,	384	Dec. 1, 1897,	10,567	2.00	-	-	-	-
Dudley,	391	Dec. 16, 1897,	15,840	3.00	-	-	-	-
Fitchburg, <sup>2</sup>	17	July 5, 1894,	5,493	1.04	5,133	.97	-	-
Fitchburg, <sup>3</sup>	62	July 20, 1894,	20,800	3.94	-	-	3,050	.58
Fitchburg, <sup>4</sup>	93	Oct. 3, 1894,	10,560	2.00	-	-	-	-
Fitchburg, <sup>5</sup>	339	May 14, 1897,	5,280	1.00	3,196	.61	-	-
Gardner,	13	July 3, 1894,	23,656	5.62	12,520	2.37	3,300	.62
Grafton,	213	Aug. 15, 1895,	16,971	3.21	7,200	1.37	1,004	.19
Hardwick,	207	July 31, 1895,	5,357	1.01	2,052	.39	-	-
Harvard,	260	June 11, 1896,	25,700	4.87	-	-	3,709	.70
Holden, <sup>6</sup>	10	July 3, 1894,	27,920	5.29	16,690	3.16	3,170	.60
Holden, <sup>6</sup>	437	Nov. 2, 1898,	9,240	1.75	-	-	-	-
Hopedale, <sup>7</sup>	144	Mar. 16, 1895,	6,040	1.14	-	-	-	-
Hopedale, <sup>8</sup>	423	June 20, 1898,	1,760	.33	-	-	-	-
Hubbardston,	232	Feb. 24, 1896,	10,560	2.00	-	-	-	-
Lancaster,	137	Feb. 28, 1895,	24,808	4.70	-	-	-	-
Leicester,	25	July 9, 1894,	28,110	5.32	25,680	4.87	-	-
Leominster,	91	Sept. 29, 1894,	26,400	5.00	-	-	-	-
Lunenburg,	16	July 5, 1894,	30,772	5.83	5,506	1.04	2,144	.40
Mendon,	84	Aug. 20, 1894,	18,432	3.49	-	-	-	-
Millbury, <sup>9</sup>	372	Oct. 2, 1897,	19,260	3.65	-	-	2,000	.38
Millbury, <sup>10</sup>	484	Feb. 26, 1900,	4,224	.80	-	-	-	-
Milford, <sup>7</sup>	420	June 6, 1898,	9,290	1.76	-	-	-	-
Milford, <sup>8</sup>	421	June 6, 1898,	5,550	1.05	-	-	-	-
New Braintree,	210	Aug. 6, 1895,	939	.18	920	.17	-	-
Northborough, <sup>11</sup>	122	Jan. 24, 1895,	3,840	.73	-	-	-	-
Northborough, <sup>12</sup>	153	Apr. 1, 1895,	11,000	2.08	7,199	1.33	-	-
Northborough, <sup>11</sup>	373	Oct. 4, 1897,	-	-	2,231	.42	-	-
Northborough, <sup>12</sup>	465	May 8, 1899,	16,750	3.17	-	-	2,203	.42
North Brookfield,	324	Feb. 25, 1897,	11,913	2.26	-	-	-	-

<sup>1</sup> From Oxford line.<sup>2</sup> Westminster road.<sup>3</sup> Ashby road.<sup>4</sup> Leominster road.<sup>5</sup> Lunenburg road.<sup>6</sup> Worcester-Gardner road.<sup>7</sup> Milford-Mendon road.<sup>8</sup> Milford-Upton road.<sup>9</sup> Grafton-Worcester road.<sup>10</sup> Canal and Providence streets.<sup>11</sup> Westborough Hospital road.<sup>12</sup> Worcester-Marlborough road.

## Worcester County — Continued.

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR.		LENGTH LAID OUT.			
			Feet.	Miles.	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Oakham, . . . .	199	July 11, 1895,	15,045	2.85	-	-	-	-
Oxford, <sup>1</sup> . . . .	108	Dec. 24, 1894,	33,550	6.35	-	-	-	-
Oxford, <sup>1</sup> . . . .	404	Jan. 25, 1898,	10,560	2.00	-	-	-	-
Paxton, . . . .	33	July 10, 1894,	28,500	5.40	17,116	3.24	-	-
Petersham, . . .	296	Oct. 22, 1896,	23,744	4.50	-	-	-	-
Phillipston, . .	14	July 3, 1894,	17,500	3.31	6,301	1.19	-	-
Princeton, <sup>2</sup> . . .	193	June 22, 1895,	14,221	2.69	2,602	.49	2,650	.50
Princeton, <sup>3</sup> . . .	452	Dec. 29, 1898,	5,730	1.09	-	-	-	-
Royalston, . . .	302	Dec. 7, 1896,	23,195	4.39	-	-	-	-
Rutland, <sup>4</sup> . . . .	141	Mar. 5, 1895,	24,581	4.66	-	-	-	-
Rutland, <sup>5</sup> . . . .	142	Mar. 5, 1895,	24,268	4.60	-	-	-	-
Shrewsbury, <sup>6</sup> . .	21	July 6, 1894,	11,000	2.08	11,000	2.08	-	-
Shrewsbury, <sup>6</sup> . .	308	Jan. 6, 1897,	4,092	.78	4,092	.78	-	-
Shrewsbury, <sup>6</sup> . .	394	Dec. 22, 1897,	2,800	.53	2,800	.53	-	-
Shrewsbury, <sup>6</sup> . .	429	July 11, 1898,	10,560	2.00	370	.07	2,305	.44
Southborough, <sup>7</sup> .	161	Apr. 18, 1895,	5,300	1.00	-	-	-	-
Southborough, <sup>8</sup> .	447	Dec. 20, 1898,	5,440	1.03	-	-	-	-
Southbridge, <sup>9</sup> . .	403	Jan. 13, 1898,	9,846	1.87	-	-	-	-
Southbridge, <sup>10</sup> .	486	Mar. 22, 1900,	2,640	.50	-	-	-	-
Spencer, <sup>11</sup> . . . .	49	July 19, 1894,	23,418	4.44	2,276	.43	4,524	.86
Spencer, <sup>12</sup> . . . .	320	Feb. 19, 1897,	-	-	-	-	-	-
Sterling, <sup>13</sup> . . . .	168	May 1, 1895,	5,280	1.00	4,034	.76	-	-
Sterling, <sup>13</sup> . . . .	318	Feb. 18, 1897,	5,280	1.00	-	-	-	-
Sterling, <sup>14</sup> . . . .	319	Feb. 18, 1897,	12,882	2.44	-	-	-	-
Sterling, <sup>13</sup> . . . .	358	July 8, 1897,	500	.09	-	-	-	-
Sterling, <sup>13</sup> . . . .	396	Dec. 23, 1897,	10,091	1.91	2,807	.53	-	-
Sturbridge, . . .	169	May 7, 1895,	12,600	2.39	3,094	.59	-	-
Sutton, <sup>15</sup> . . . .	85	Aug. 25, 1894,	6,096	1.16	-	-	-	-
Sutton, <sup>16</sup> . . . .	385	Dec. 1, 1897,	7,770	1.47	2,599	.49	-	-
Templeton, . . .	86	Sept. 1, 1894,	31,600	5.98	3,300	.63	-	-
Upton, . . . .	305	Dec. 18, 1896,	27,443	5.20	-	-	-	-

<sup>1</sup> Worcester-Webster road.<sup>2</sup> Princeton Depot road.<sup>3</sup> Sterling road.<sup>4</sup> Worcester-Gardner road.<sup>5</sup> Worcester-Athol road.<sup>6</sup> Worcester-Marlborough road.<sup>7</sup> Framingham road.<sup>8</sup> Westborough road.<sup>9</sup> Charlton City road.<sup>10</sup> West Main Street.<sup>11</sup> Springfield-Worcester road.<sup>12</sup> Duplicate of previous petition.<sup>13</sup> Worcester-Fitchburg road.<sup>14</sup> Lancaster road.<sup>15</sup> Grafton road.<sup>16</sup> Worcester road.

*Worcester County — Concluded.*

COUNTY, CITY OR TOWN.	No.	Petition received.	LENGTH PETITIONED FOR		LENGTH LAID OUT.			
			Feet.	Miles	1894-99.		1900.	
					Feet.	Miles.	Feet.	Miles.
Uxbridge, <sup>1</sup> . . . .	89	Sept. 28, 1894,	15,759	2.98	6,717	1.28	-	-
Uxbridge, <sup>2</sup> . . . .	379	Nov. 2, 1897,	6,140	1.17	-	-	-	-
Warren, <sup>3</sup> . . . .	15	July 5, 1894,	28,020	5.31	12,978	2.46	1,930	.37
Warren, <sup>4</sup> . . . .	39	July 16, 1894,	18,868	3.57	-	-	-	-
Webster, . . . .	392	Dec. 16, 1897,	7,700	1.46	-	-	-	-
Westborough, <sup>5</sup> . . .	160	Apr. 14, 1895,	1,100	.21	1,100	.21	-	-
Westborough, <sup>6</sup> . . .	306	Dec. 30, 1896,	-	-	-	-	-	-
Westborough, <sup>5</sup> . . .	371	Sept. 27, 1897,	2,579	.49	2,579	.49	-	-
Westborough, <sup>5</sup> . . .	401	Jan. 10, 1898,	6,048	1.15	-	-	-	-
Westborough, <sup>6</sup> . . .	475	June 18, 1899,	34,320	6.50	-	-	-	-
West Boylston, <sup>7</sup> . . .	310	Jan. 15, 1897,	6,100	1.16	6,100	1.16	-	-
West Boylston, <sup>7</sup> . . .	369	Sept. 22, 1897,	3,900	.74	2,100	.40	-	-
West Brookfield, <sup>8</sup> . .	222	Dec. 5, 1895,	800	.15	800	.15	-	-
West Brookfield, <sup>3</sup> . .	312	Jan. 25, 1897,	13,350	2.53	2,300	.44	2,000	.38
West Brookfield, <sup>3</sup> . .	382	Nov. 12, 1897,	5,280	1.00	-	-	-	-
Westminster, . . . .	23	July 9, 1894,	30,597	5.79	15,825	3.00	-	-
Winchendon, . . . .	317	Feb. 17, 1897,	8,866	1.68	-	-	-	-
Worcester, <sup>9</sup> . . . .	162	Apr. 22, 1895,	7,636	1.44	7,157	1.35	-	-
Worcester, <sup>10</sup> . . . .	327	Mar. 4, 1897,	12,155	2.30	3,486	.66	-	-
Worcester, <sup>11</sup> . . . .	328	Mar. 4, 1897,	12,645	2.39	-	-	2,850	.54
Total, . . . .	.	.	1,248,346	236.43	251,296	47.60	44,191	8.37

Ninety-six petitions (seven city and eighty-nine town) in two cities and fifty-four towns.

Average distance petitioned for, 13,004 feet (2.46 miles).

One hundred and seven lay-outs, in two cities and thirty towns.

Laid out on city petitions, 24,872 feet (4.71 miles).

Laid out on town petitions, 270,615 feet (51.25 miles).

Total length laid out, 295,487 feet (55.96 miles).

Percentage of length laid out to length petitioned for, 23.67.

<sup>1</sup> Blackstone Valley road.

<sup>2</sup> Mendon road.

<sup>3</sup> Springfield-Worcester road.

<sup>4</sup> To Connecticut line *via* Brimfield.

<sup>5</sup> Westborough Hospital road.

<sup>6</sup> Southborough-Grafton road.

<sup>7</sup> Worcester-Fitchburg road.

<sup>8</sup> Ware road.

<sup>9</sup> Pleasant Street to Paxton.

<sup>10</sup> Grove Street to Holden.

<sup>11</sup> West Boylston Street.

## SUMMARY BY COUNTIES.

COUNTIES.	PETITIONS RECEIVED.				PETITIONS SITUATED IN —			LAY-OUTS MADE IN —			Number of Lay-outs.
	County.	City.	Town.	Total.	Cities.	Towns.	Total.	Cities.	Towns.	Total.	
Barnstable, . . .	-	-	24	24	-	13	13	-	10	10	38
Berkshire, . . .	16	5	29	50	2	23	25	2	10	12	35
Bristol, . . .	1	4	22	27	2	16	18	1	10	11	37
Dukes, . . .	2	-	4	6	-	5	5	-	4	4	12
Essex, . . .	2	15	33	50	7	24	31	6	12	18	38
Franklin, . . .	1	-	40	41	-	16	16	-	12	12	38
Hampden, . . .	4	1	18	23	2	16	18	1	8	9	36
Hampshire, . . .	1	3	27	31	1	17	18	1	9	10	33
Middlesex, . . .	10	11	62	83	6	42	48	3	19	22	64
Nantucket, . . .	-	-	1	1	-	1	1	-	1	1	10
Norfolk, . . .	-	2	30	32	1	21	22	1	10	11	40
Plymouth, . . .	-	4	33	37	1	24	25	1	12	13	49
Suffolk, . . .	-	1	6	7	1	2	3	-	1	1	4
Worcester, . . .	-	7	89	96	2	54	56	2	30	32	107
Totals, . . .	37	53	418	508	25	274	299	18	148	166	541

SUMMARY BY COUNTIES — *Concluded.*

COUNTIES.	LENGTHS PETITIONED FOR.		LENGTHS LAID OUT.						Percentage.
			1894-99.		1900.		TOTAL.		
	Feet.	Miles.	Feet.	Miles.	Feet.	Miles.	Feet.	Miles	
Barnstable, .	411,748	77.98	128,928	24.42	20,104	3.81	149,032	28.23	36.20
Berkshire, . .	459,175	86.97	103,089	19.52	13,720	2.60	116,809	22.12	25.43
Bristol, . . .	483,742	91.62	95,115	18.01	24,977	4.73	120,092	22.74	24.82
Dukes, . . .	119,723	22.67	40,988	7.76	2,100	.40	43,088	8.16	35.99
Essex, . . .	725,462	137.40	110,751	20.98	23,990	4.54	134,741	25.52	18.57
Franklin, . . .	436,851	82.74	87,782	16.63	14,162	2.68	101,944	19.31	23.34
Hampden, . . .	480,513	91.01	99,224	18.80	9,697	1.84	108,921	20.64	22.66
Hampshire, . .	290,565	55.03	72,305	13.69	16,868	3.19	89,173	16.88	30.67
Middlesex, . .	1,211,272	229.41	174,892	33.12	46,904	8.89	221,796	42.01	18.31
Nantucket, . .	34,185	6.47	23,590	4.47	3,700	.70	27,290	5.17	79.91
Norfolk, . . .	428,008	81.06	87,495	16.57	20,499	3.88	107,994	20.45	25.23
Plymouth, . . .	659,381	124.88	125,082	23.69	19,909	3.78	144,991	27.47	22.00
Suffolk, . . .	56,375	10.68	6,580	1.24	-	-	6,580	1.24	11.42
Worcester, . .	1,248,346	236.43	251,296	47.60	44,191	8.36	295,487	55.96	23.67
Totals, . . .	7,045,346	1,334.35	1,407,117	266.50	260,821	49.40	1,667,938	315.90	23.68

Laid out on county petitions, 358,799 feet (67.95 miles).

Laid out on city petitions, 145,812 feet (27.62 miles).

Laid out on town petitions, 1,163,317 feet (220.33 miles).

Average distance petitioned for, 13,869 feet (2.63 miles).

Average length laid out, 3,083 feet (.58 mile).





# INDEX.

---

## A.

	PAGE
Acts and Resolves relating to the work of the commission, . . . . .	88
Allotments for State highway construction, . . . . .	28
Appropriations for salaries and expenses, 1898-1900, inclusive, . . . . .	108
Appropriations for State highway construction, 1894-1900, inclusive, . . . . .	108
Appropriations in 1900, discussion of, . . . . .	7
Assessments, county, . . . . .	13

## B.

Bridges, . . . . .	43
--------------------	----

## C.

Chief engineer, report of, . . . . .	41
Claims against commission, statement of, . . . . .	77
Commissioners, assignment of divisions of State to, . . . . .	9
Construction details, . . . . .	14
Contracts, general discussion of, . . . . .	9
Contracts, number of, in 1900, . . . . .	10
Contracts, prices in 1900, . . . . .	78
Contracts, supervision of, . . . . .	9
Cost of maintenance, . . . . .	111
Cost of State highways, . . . . .	20
Cost of work, comparison of, when done by municipalities and by private contractors, . . . . .	9
Cost per standard mile of road in 1900, . . . . .	109
County assessments, . . . . .	13
Cross-sections, changes in, . . . . .	45
Culverts, . . . . .	17

## D.

Damages, land and grade, . . . . .	14
Damages, land and grade, assumption by municipalities, . . . . .	14
Damages, land and grade, statement of claims, . . . . .	77
Damages, liquidated, effect of clause in contract, . . . . .	10
Distribution of State highways, . . . . .	84
Division of State assigned to each commissioner, . . . . .	9
Drains (see Side Drains).	

## E.

	PAGE
Employees, . . . . .	9
Engineer, chief, report of, . . . . .	41
Engineer, resident, work on which engaged during 1900, . . . . .	72
Estimates for 1901, . . . . .	13
Expenditures for construction, . . . . .	29
Expenditures for maintenance, . . . . .	33
Expenditures for road machinery, . . . . .	37
Expenditures for salaries and expenses, . . . . .	36

## F.

Fencing (see Guard Rail).	
Foundations, discussion of, . . . . .	14

## G.

Geologist, . . . . .	13
Geological studies, . . . . .	13
Grades, discussion of, . . . . .	19
Gravel roads, . . . . .	18-45
Gravel, sizes of, used, . . . . .	18
Guard rail, . . . . .	17
Guard rail, painting of, . . . . .	44

## H.

Hearings, county, . . . . .	8
Hearings, special, . . . . .	8
Hearings, special, witnesses at, . . . . .	8

## L.

Land and grade damages, . . . . .	14
Land and grade damages, assumption by municipalities, . . . . .	14
Lay-outs in 1900, . . . . .	7
Lay-outs in 1900, details of, . . . . .	56-116
Length of State highway completed, . . . . .	7
Liquidated damage clause in contract, effect of, . . . . .	10

## M.

Maintenance of State highways, . . . . .	22
Maintenance, amount to be assessed on towns and cities, . . . . .	111
Maintenance, cost of, . . . . .	111
Materials used in construction of State highways, . . . . .	19
Materials used, quantities of, . . . . .	42
Meetings of commission, . . . . .	7
Municipalities in which work was done during 1900, . . . . .	72

## O.

	PAGE
Office expenses, . . . . .	36
Officers of the Massachusetts Highway Commission, list of, . . . . .	5

## P.

Painting of guard rails, . . . . .	44
Petitions, number of, in 1900, . . . . .	10
Petitions received and State highways laid out, . . . . .	116
Petitions, summary of, . . . . .	135
Petitions, total length of road petitioned for, . . . . .	10
Petitions, total number of, . . . . .	10
Prices, contract, in 1900, . . . . .	78
Progress of work in 1900, . . . . .	10
Property values, effect of State highways on, . . . . .	21

## R.

Repairs and maintenance (see Maintenance).	
Resident engineers employed in 1900, list of, . . . . .	72
Road rollers, . . . . .	16
Road rollers owned by Commonwealth, . . . . .	23
Roadsides and trees, . . . . .	18
Roadways, widths of, . . . . .	17

## S.

Side drains, . . . . .	17
"Small town" act, . . . . .	24
"Small town" act, expenditures, . . . . .	37
"Small town" act, work done under, in various towns, . . . . .	26
Statutes relating to the work of the commission, . . . . .	88
Stone used for surfacing, sizes of, . . . . .	15
Stone used in construction of State highways, . . . . .	16
Street railways, general discussion of, . . . . .	11
Street railways on State highways, . . . . .	11
Surfacing, broken stone, . . . . .	15
Surfacing, gravel, . . . . .	18
Supervision of work under contracts, . . . . .	9
Surveys, . . . . .	42
Surveying department, work of, . . . . .	42

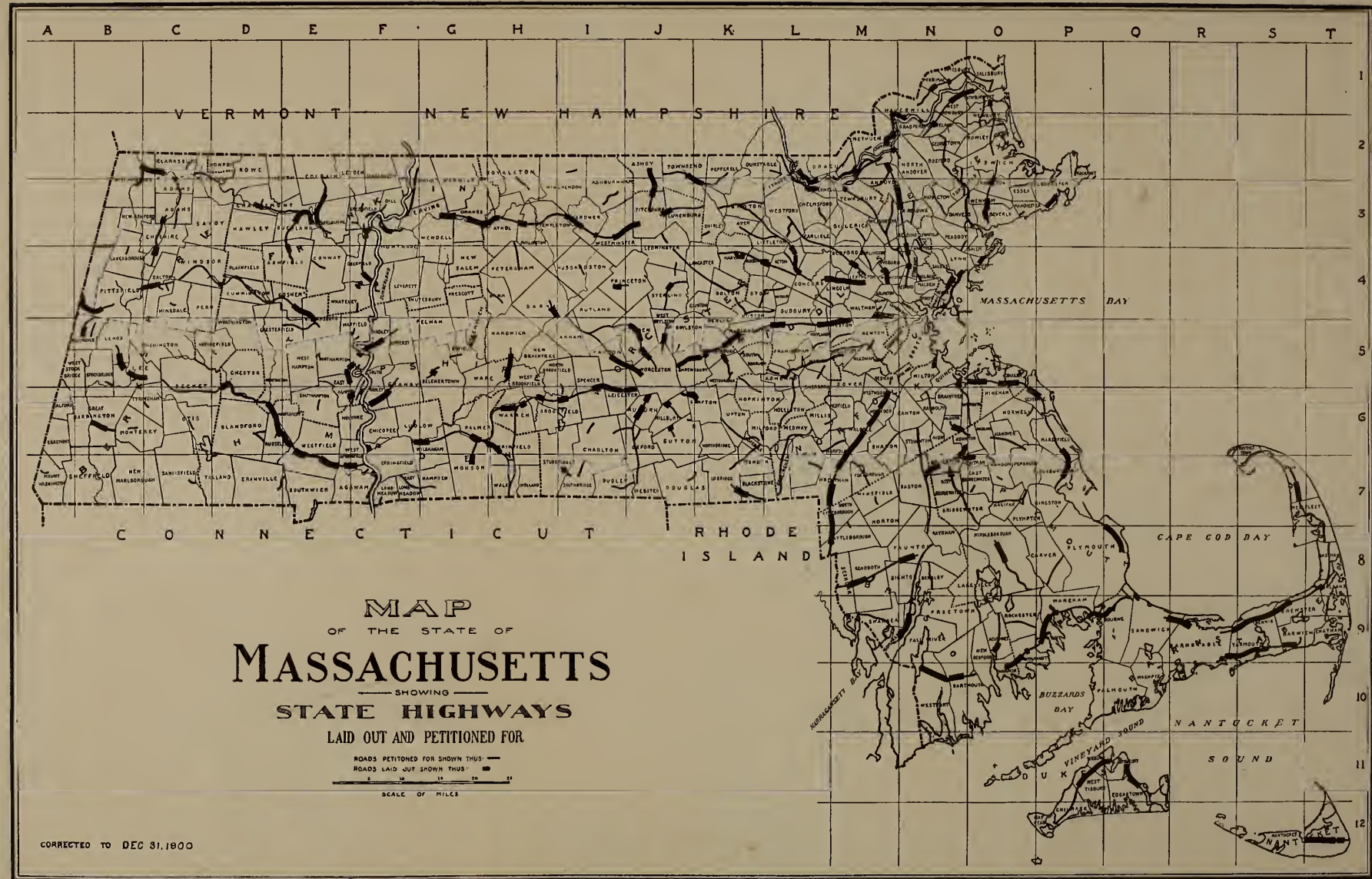
## T.

Travelled way, widths of, . . . . .	47
Trees, . . . . .	18
Truro, discussion of road in, . . . . .	18

## W.

Widths of roadways, . . . . .	17
Widths of travelled way, . . . . .	47





MAP  
OF THE STATE OF  
**MASSACHUSETTS**  
— SHOWING —  
**STATE HIGHWAYS**  
LAID OUT AND PETITIONED FOR

ROADS PETITIONED FOR SHOWN THUS: —  
ROADS LAID OUT SHOWN THUS: —  
SCALE OF MILES  
0 5 10 15 20

CORRECTED TO DEC 31, 1900







